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FIBER ORGANON

Formerly Textile Organon

Volume 60, No. 6 ☐ June 1989

A publication of *Fiber Economics Bureau, Inc.*

WORLDWIDE MANUFACTURED FIBER SURVEY

Highlights

- Worldwide Survey -

  Fiber Demand
  Production and Producing Capacities
  Utilization Rates
  Directory of Producers
  Ownership Listing
  Olefin Fiber Production

Featuring ...

Our annual survey of worldwide manufactured fiber production and planned capacity, with a worldwide directory of manufactured fiber producers.

Worldwide data in this issue are reported in thousand metric tons. The production and capacity tables will be published again in the July issue in millions of pounds. Country data on available supply will be published in the ***Fiber Organon*** as soon as information is available.

Data for previous years for most of the tables in this issue can be found in the ***Textile Organon Base Book*** (1962) and subsequent June issues of the ***Textile Organon***. The cotton demand figures shown in the table below are based on worldwide consumption rather than production, to eliminate problems from wide swings in cotton inventories.

TABLE 1:
WORLDWIDE DEMAND FOR CERTAIN FIBERS
THOUSAND METRIC TONS

TYPE OF FIBER	1984	1985	1986	1987	1988	% CHANGE 1988 / 1987
ARTIFICIAL (CELLULOSIC) FIBERS						
YARN + MONOFILAMENTS	935	921	928	909	935	*+2.9*
STAPLE + TOW	2061	2007	1935	1941	1950	*+0.5*
TOTAL ARTIFICIAL (CELLULOSIC)	**2996**	**2928**	**2863**	**2850**	**2885**	***+1.2***
SYNTHETIC (NONCELLULOSIC) FIBERS						
YARN + MONOFILAMENTS	5224	5576	5705	6062	6428	*+6.0*
STAPLE + TOW	6580	6860	7186	7605	7811	*+2.7*
TOTAL SYNTHETIC (NONCELLULOSIC)	**11804**	**12436**	**12891**	**13667**	**14239**	***+4.2***
TOTAL MANUFACTURED [a]	**14800**	**15364**	**15754**	**16517**	**17094**	***+3.5***
% of World Total	*47%*	*46%*	*44%*	*45%*	*46%*	
NATURAL FIBERS						
RAW COTTON [b]	15272	16565	18309	18163	18191	*+0.2*
RAW WOOL [c]	1655	1722	1717	1764	1797	*+1.9*
RAW SILK [d]	56	59	63	63	64	*+1.6*
TOTAL NATURAL	**16983**	**18346**	**20089**	**19990**	**20052**	***+0.3***
% of World Total	*53%*	*54%*	*56%*	*55%*	*54%*	
WORLD TOTAL	**31783**	**33710**	**35843**	**36507**	**37176**	***+1.8***
World Total %	*100%*	*100%*	*100%*	*100%*	*100%*	

The silk and manufactured fiber data are on a calendar year basis, while the figures for cotton and wool are on a seasonal basis.

a. Manufactured fiber data are from tables 3 and 4. Glass fiber, olefin and acetate cigarette tow production are not included.

b. International Cotton Advisory Committee. ***COTTON: Review of the World Situation***, May - June 1989. New series based on cotton consumption data.

c. Commonwealth Secretariat data, on a clean wool basis. See also the December 1988 ***Textile Organon***, page 263.

d. International Silk Association; Food and Agriculture Organization of the United Nations.

June 1989

Fiber Organon

A Monthly Review

Formerly ***Textile Organon***

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FIBER ECONOMICS BUREAU, INC.
President & Editor
Rosemarie D. Frick

Publishing Headquarters:
Fiber Economics Bureau, Inc.
101 Eisenhower Parkway
Roseland, NJ 07068
U.S.A.
Telephone (201) 228-1107
Facsimile (201) 228-7598

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TABLE 2:
NUMBER OF MANUFACTURED FIBER PRODUCING PLANTS (EXCEPT OLEFIN)

COUNTRY & REGION	CELLULOSIC		NONCELLULOSIC					GLASS FIBER	GRAND TOTAL
	ACETATE[a]	RAYON	ACRYLIC[b]	NYLON[c]	POLY-ESTER	OTHER[d]	TOTAL		
WESTERN EUROPE									
AUSTRIA		2			1	1	2		4
BELGIUM/LUXEMBOURG	1	1		3	1		4	2	8
FINLAND		1		1			1	1	3
FRANCE		1	1	8	3	1	13	2	16
GERMANY, FED. REP.	1	4	2	11	12	4	29	2	36
GREECE		1		2	3		5		6
IRELAND			1	1	2		4		4
ITALY/MALTA	2	2	5	17	10	2	34	2	40
NETHERLANDS		1		1	1	2	4	1	6
NORWAY								1	1
PORTUGAL		2	1	2	1		4	1	7
SPAIN	1	2	2	7	6		15	1	19
SWEDEN		1						1	2
SWITZERLAND				5	3		8		8
TURKEY		1	2	4	8		14	1	16
UNITED KINGDOM	2	1	2	8	6	3	19	5	27
TOTAL WESTERN EUROPE	7	20	16	70	57	13	156	20	203
EASTERN EUROPE									
ALBANIA			1		1		2		2
BULGARIA		1	1	1	1		3		4
CZECHOSLOVAKIA		6		3	2		5	2	13
GERMANY, DEM. REP.		8	2	3	2	1	8	1	17
HUNGARY		1	1	1			2		3
POLAND		5	1	1	2	2	6	2	13
ROMANIA		3	1	1	4		6		9
USSR	4	15	1	12	4	1	18	11	48
YUGOSLAVIA		2	1	2	5		8	1	11
TOTAL EASTERN EUROPE	4	41	9	24	21	4	58	17	120
U.S.A.	4	4	5	36	34	9	84	17	109
CANADA	1	1		3	1	1	5	1	8
OTHER AMERICAS									
ARGENTINA	1		1	7	5	1	14	1	16
BOLIVIA			1		1		2		2
BRAZIL		2	2	17	12	1	32	1	35
CHILE		1		2	3		5		6
COLOMBIA				2	3		5		5
COSTA RICA					1		1		1
CUBA		1							1
ECUADOR					3		3		3
GUATEMALA				1			1		1
MEXICO	1	1	3	9	9	2	23	1	26
PERU	1		1	4	4		9		10
URUGUAY	1			3	2		5		6
VENEZUELA	1			2	4	1	7		8
TOTAL OTHER AMERICAS	5	5	8	47	47	5	107	3	120
JAPAN	2	13	7	12	14	18	51	13	79
CHINA, PRC	e	9	10	12	20	8	50	3	62
OTHER ASIA									
BANGLADESH		2	1	1			2		4
INDIA	1	12	3	9	16		28		41
INDONESIA		3	1	5	11		17		20
KOREA, REP. OF	1	1	2	5	10	1	18		20
MALAYSIA			2	1	3		6		6
PAKISTAN	1			3	9		12		13
PHILIPPINES		1		2	2		4		5
SRI LANKA				1			1		1
TAIWAN		2	3	14	17		34		36
THAILAND		1		3	4		7		8
TOTAL OTHER ASIA	3	22	12	44	72	1	129		154
MIDDLE EAST, AFRICA & OCEANIA									
AUSTRALIA				3	2	1	6	1	7
EGYPT		2		1	2		3		5
IRAN			1	2	1		4		4
IRAQ		1							1
ISRAEL				1			1		1
KENYA				1	5		6		6
NIGERIA					1		1		1
SOUTH AFRICA			1		4		5		5
TANZANIA					1		1		1
TOTAL MIDDLE EAST, AFRICA & OCEANIA		3	1	9	16	1	27	1	31
WORLD TOTAL*	26	118	68	257	282	60	667	75	886

Planned facilities indicated by an asterick (*) in our listing of worldwide producers are not included in the above table.

* Data for North Korea are not included here.

a. Acetate includes triacetate.

b. Acrylic includes modacrylic.

c. Nylon excludes aramid.

d. Other includes 19 spandex, 13 vinyon, 6 saran, 5 aramid, 5 vinal, 2 biconstituent, 2 fluorocarbon, and 1 each of azlon, cupro, PBI, polyacrylate, polycarbonate, polychlal, polyoxamide and promix.

e. China, PRC acetate data included with rayon data.

TABLE 3:
WORLDWIDE SYNTHETIC (NONCELLULOSIC) FIBER PRODUCTION & PRODUCING CAPACITY BY COUNTRY EXCEPT OLEFIN

THOUSAND METRIC TONS

	ACTUAL PRODUCTION								
	1984			1985			1986		
COUNTRY	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
WESTERN EUROPE									
AUSTRIA	0	18.1	18.1	0	18.1	18.1	0	15.9	15.9
BENELUX[a]	76.1	24.1	100.2	80.5	30.1	110.6	73.0	34.4	107.4
FRANCE	60.2	131.5	191.7	60.7	122.0	182.7	61.2	106.0	167.2
GERMANY, FED. REP.	352.0	379.0	731.0	360.0	402.0	762.0	350.0	395.0	745.0
GREECE	9.0	10.0	19.0	9.0	10.0	19.0	9.4	10.5	19.9
IRELAND	11.5	38.7	50.2	11.5	45.3	56.8	11.0	61.0	72.0
ITALY/MALTA	154.0	373.8	527.8	171.6	392.0	563.6	175.0	401.9	576.9
SPAIN	77.6	182.8	260.4	85.0	189.9	274.9	84.9	191.3	276.2
SWITZERLAND	71.7	27.8	99.5	73.1	26.6	99.7	67.1	26.0	93.1
TURKEY	48.5	112.7	161.2	52.0	134.0	186.0	60.0	169.0	229.0
UNITED KINGDOM	80.0	160.0	240.0	84.7	158.0	242.7	78.2	130.0	208.2
TOTAL WESTERN EUROPE	**940.6**	**1458.5**	**2399.1**	**988.1**	**1528.0**	**2516.1**	**969.8**	**1541.0**	**2510.8**
EASTERN EUROPE									
ALBANIA	0	0	0	0.4	0	0.4	0.4	0	0.4
BULGARIA	24.9	42.8	67.7	28.0	42.8	70.8	38.0	47.9	85.9
CZECHOSLOVAKIA	69.9	37.1	107.0	76.0	38.8	114.8	86.7	45.8	132.5
GERMANY, DEM. REP.	65.0	78.9	143.9	65.0	80.8	145.8	77.0	81.8	158.8
HUNGARY	8.6	12.6	21.2	8.4	14.4	22.8	8.4	15.6	24.0
POLAND	83.3	61.0	144.3	86.4	50.6	137.0	85.6	46.6	132.2
ROMANIA	57.0	117.4	174.4	58.0	138.8	196.8	58.8	140.9	199.7
USSR	372.8	285.5	658.3	388.8	324.0	712.8	404.8	353.0	757.8
YUGOSLAVIA	33.5	60.9	94.4	35.5	59.5	95.0	39.7	57.6	97.3
TOTAL EASTERN EUROPE	**715.0**	**636.2**	**1411.2**	**746.5**	**749.7**	**1496.2**	**799.4**	**789.2**	**1588.6**
TOTAL EUROPE	**1655.6**	**2154.7**	**3810.3**	**1734.6**	**2277.7**	**4012.3**	**1769.2**	**2330.2**	**4099.4**

Y Yarn+monofilaments.
S Staple+tow+fiberfill.
a. Includes Belgium, Netherlands and Luxembourg.

ACTUAL PRODUCTION						PRODUCING CAPACITY					
1987			1988			3/1989			12/1990		
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
0	15.7	15.7	0	17.4	17.4	*0*	*22.0*	*22.0*	*0*	*22.0*	*22.0*
74.0	33.0	107.0	69.9	31.1	101.0	*103.5*	*83.0*	*186.5*	*103.5*	*74.0*	*177.5*
56.8	104.2	161.0	56.6	116.4	173.0	*84.0*	*133.0*	*217.0*	*84.0*	*133.0*	*217.0*
355.3	404.0	759.3	363.5	416.5	780.0	*419.0*	*431.0*	*850.0*	*423.0*	*438.0*	*861.0*
9.4	10.0	19.4	9.6	8.5	18.1	*17.0*	*12.0*	*29.0*	*17.0*	*12.0*	*29.0*
11.0	63.0	74.0	13.0	66.2	79.2	*14.0*	*67.0*	*81.0*	*14.0*	*82.0*	*96.0*
171.0	393.6	564.6	167.8	383.4	551.2	*194.7*	*431.0*	*625.7*	*197.7*	*446.0*	*643.7*
80.5	188.0	268.5	79.6	188.8	268.4	*119.0*	*224.0*	*343.0*	*119.0*	*222.0*	*341.0*
66.2	22.1	88.3	72.2	23.4	95.6	*85.0*	*33.0*	*118.0*	*85.0*	*33.0*	*118.0*
69.0	191.0	260.0	77.0	205.0	282.0	*128.0*	*226.0*	*354.0*	*166.0*	*241.0*	*407.0*
81.4	121.6	203.0	81.4	115.6	197.0	*107.0*	*179.0*	*286.0*	*107.0*	*179.0*	*286.0*
974.6	**1546.2**	**2520.8**	**990.6**	**1572.3**	**2562.9**	***1271.2***	***1841.0***	***3112.2***	***1316.2***	***1882.0***	***3198.2***
0.5	0	0.5	0.5	0	0.5	*2.0*	*5.0*	*7.0*	*2.0*	*5.0*	*7.0*
39.6	48.7	88.3	40.9	49.0	89.9	*60.0*	*91.0*	*151.0*	*60.0*	*108.0*	*168.0*
88.8	46.5	135.3	92.4	48.0	140.4	*100.5*	*87.0*	*187.5*	*100.5*	*87.0*	*187.5*
77.9	80.7	158.6	83.8	84.2	168.0	*97.0*	*128.0*	*225.0*	*97.0*	*128.0*	*225.0*
7.2	16.9	24.1	8.4	18.1	26.5	*12.0*	*23.0*	*35.0*	*12.0*	*43.0*	*55.0*
90.0	46.6	136.6	90.0	50.4	140.4	*110.2*	*84.0*	*194.2*	*110.2*	*86.0*	*196.2*
59.5	142.4	201.9	59.4	143.6	203.0	*68.0*	*174.0*	*242.0*	*68.0*	*179.0*	*247.0*
435.0	401.0	836.0	457.7	410.8	868.5	*494.0*	*488.0*	*982.0*	*525.0*	*538.0*	*1063.0*
44.0	63.9	107.9	42.8	57.8	100.6	*78.0*	*100.0*	*178.0*	*81.0*	*112.0*	*193.0*
842.5	**846.7**	**1689.2**	**875.9**	**861.9**	**1737.8**	***1021.7***	***1180.0***	***2201.7***	***1055.7***	***1286.0***	***2341.7***
1817.1	**2392.9**	**4210.0**	**1866.5**	**2434.2**	**4300.7**	***2292.9***	***3021.0***	***5313.9***	***2371.9***	***3168.0***	***5539.9***

TABLE 3:
WORLDWIDE SYNTHETIC (NONCELLULOSIC) FIBER PRODUCTION & PRODUCING CAPACITY BY COUNTRY EXCEPT OLEFIN *(CONTINUED)*

THOUSAND METRIC TONS

	ACTUAL PRODUCTION								
	1984			1985			1986		
COUNTRY	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
U.S.A.	1259.8	1677.1	2936.9	1286.3	1577.9	2864.2	1260.2	1658.6	2918.8
CANADA	69.6	59.0	128.6	75.1	58.0	133.1	75.3	64.3	139.6
OTHER AMERICAS									
ARGENTINA	27.3	21.4	48.7	27.1	16.8	43.9	30.7	24.4	55.1
BOLIVIA	0	0	0	0	0	0	0	0	0
BRAZIL	118.2	97.6	215.8	121.7	95.8	217.5	134.8	102.2	237.0
CHILE	2.8	1.1	3.9	4.1	2.0	6.1	4.0	2.3	6.3
COLOMBIA	38.6	10.7	49.3	38.3	9.9	48.2	38.1	9.2	47.3
COSTA RICA	3.5	0	3.5	3.5	0	3.5	4.2	0	4.2
ECUADOR	4.8	0	4.8	4.9	0	4.9	5.8	+	5.8
MEXICO	147.4	152.8	300.2	155.5	150.4	305.9	134.7	161.6	296.3
PERU	13.0	34.1	47.1	11.3	33.0	44.3	11.6	34.5	46.1
URUGUAY	1.6	3.4	5.0	1.8	4.0	5.8	1.8	3.2	5.0
VENEZUELA	10.2	5.5	15.7	12.5	6.0	18.5	13.4	6.5	19.9
TOTAL OTHER AMERICAS	367.4	326.6	694.0	380.7	317.9	698.6	379.1	343.9	723.0
JAPAN	634.0	735.3	1369.3	645.4	757.3	1402.7	605.2	750.4	1355.6
CHINA, PRC	99.1	460.3	559.4	134.9	597.1	732.0	153.8	593.6	747.4
OTHER ASIA									
BANGLADESH	0.3	0	0.3	0.5	0	0.5	0.5	0	0.5
INDIA	106.3	56.0	162.3	127.5	66.2	193.7	139.1	81.6	220.7
INDONESIA	71.5	73.3	144.8	76.9	70.3	147.2	86.2	78.0	164.2
KOREA, REP. OF	369.6	376.9	746.5	408.7	402.9	811.6	436.5	425.9	862.4
MALAYSIA	0	35.5	35.5	0	38.8	38.8	0	37.9	37.9
PAKISTAN	12.8	21.7	34.5	20.0	23.0	43.0	25.8	24.4	50.2
PHILIPPINES	20.5	13.0	33.5	22.0	12.2	34.2	20.0	15.0	35.0
SRI LANKA	1.0	0	1.0	1.2	0	1.2	1.3	0	1.3
TAIWAN	419.3	452.5	871.8	509.5	514.1	1023.6	605.6	626.5	1232.1
THAILAND	39.7	52.4	92.1	42.6	55.0	97.6	40.0	57.0	97.0
TOTAL OTHER ASIA	1041.0	1081.3	2122.3	1208.9	1182.5	2391.4	1355.0	1346.3	2701.3
MIDDLE EAST, AFRICA & OCEANIA									
AUSTRALIA/N.Z.	13.0	1.0	14.0	14.6	1.0	15.6	16.3	1.0	17.3
EGYPT	5.5	25.6	31.1	5.6	27.6	33.2	6.3	30.6	36.9
IRAN	13.5	20.0	33.5	13.5	25.0	38.5	9.5	26.0	35.5
ISRAEL	9.5	7.0	16.5	13.7	7.3	21.0	10.5	8.0	18.5
KENYA	4.5	0	4.5	5.1	0	5.1	5.1	1.0	6.1
NIGERIA	3.0	3.0	6.0	3.2	3.0	6.2	3.5	3.1	6.6
SOUTH AFRICA	46.5	29.7	76.2	52.8	27.4	80.2	54.2	29.5	83.7
TANZANIA	2.0	0	2.0	2.0	0	2.0	2.5	0	2.5
TOTAL M.E., A. & O.	97.5	86.3	183.8	110.5	91.3	201.8	107.9	99.2	207.1
TOTAL WORLD	5224.0	6580.6	11804.6	5576.4	6859.7	12436.1	5705.7	7186.5	12892.2

ACTUAL PRODUCTION						PRODUCING CAPACITY					
1987			1988			3/1989			12/1990		
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
1304.5	1789.8	3094.3	1340.9	1806.0	3146.9	*1500.8*	*1998.3*	*3499.1*	*1526.9*	*1917.2*	*3444.1*
71.5	58.2	129.7	75.3	58.6	133.9	*124.4*	*77.0*	*201.4*	*124.4*	*77.0*	*201.4*
28.1	29.4	57.5	27.1	21.6	48.7	*65.3*	*38.0*	*103.3*	*68.3*	*38.0*	*106.3*
0	0	0	0	0	0	*5.0*	*0*	*5.0*	*5.0*	*0*	*5.0*
136.3	111.8	248.1	125.8	113.9	239.7	*174.4*	*134.6*	*309.0*	*180.4*	*143.2*	*323.6*
4.4	2.7	7.1	4.6	2.8	7.4	*10.7*	*8.0*	*18.7*	*10.7*	*8.0*	*18.7*
38.6	10.3	48.9	39.2	10.4	49.6	*59.2*	*14.0*	*73.2*	*65.3*	*27.0*	*92.3*
4.2	0	4.2	4.3	0	4.3	*8.0*	*0*	*8.0*	*8.0*	*0*	*8.0*
5.6	+	5.6	6.5	+	6.5	*10.1*	*7.0*	*17.1*	*10.1*	*7.0*	*17.1*
148.2	187.0	335.2	151.9	193.0	344.9	*198.7*	*257.0*	*455.7*	*211.7*	*288.0*	*499.7*
11.9	32.6	44.5	13.4	32.3	45.7	*21.5*	*38.0*	*59.5*	*21.5*	*38.0*	*59.5*
2.0	3.4	5.4	2.1	3.6	5.7	*5.0*	*5.5*	*10.5*	*5.0*	*5.5*	*10.5*
14.3	8.0	22.3	18.1	12.0	30.1	*23.0*	*23.0*	*46.0*	*23.0*	*23.0*	*46.0*
393.6	385.2	778.8	393.0	389.6	782.6	*580.9*	*525.1*	*1106.0*	*609.0*	*577.7*	*1186.7*
608.8	731.8	1340.6	618.9	733.0	1351.9	*827.0*	*938.3*	*1765.3*	*827.0*	*938.3*	*1765.3*
209.0	637.0	846.0	290.0	678.0	968.0	*445.0*	*880.0*	*1325.0*	*454.0*	*960.0*	*1414.0*
0.5	0	0.5	0.6	0	0.6	*0.7*	*0*	*0.7*	*0.7*	*18.0*	*18.7*
160.3	105.7	266.0	199.7	121.5	321.2	*345.0*	*324.0*	*669.0*	*369.0*	*416.0*	*785.0*
87.0	84.9	171.9	100.6	86.6	187.2	*154.0*	*170.0*	*324.0*	*199.0*	*170.0*	*369.0*
479.5	490.6	970.1	580.1	534.7	1114.8	*603.4*	*577.0*	*1180.4*	*712.4*	*599.0*	*1311.4*
0	38.9	38.9	0	48.2	48.2	*0*	*70.0*	*70.0*	*0*	*70.0*	*70.0*
27.8	25.4	53.2	31.1	26.9	58.0	*110.0*	*51.0*	*161.0*	*115.0*	*99.0*	*214.0*
21.5	12.7	34.2	24.0	14.0	38.0	*43.0*	*19.0*	*62.0*	*43.0*	*19.0*	*62.0*
1.5	0	1.5	1.5	0	1.5	*3.0*	*0*	*3.0*	*3.0*	*0*	*3.0*
715.1	676.2	1391.3	732.7	697.5	1430.2	*905.0*	*827.4*	*1732.4*	*988.0*	*859.4*	*1847.4*
51.3	67.2	118.5	56.0	74.4	130.4	*57.2*	*99.0*	*156.2*	*84.2*	*136.0*	*220.2*
1544.5	1501.6	3046.1	1726.3	1603.8	3330.1	*2221.3*	*2137.4*	*4358.7*	*2514.3*	*2386.4*	*4900.7*
18.1	1.1	19.2	18.4	1.2	19.6	*25.5*	*1.5*	*27.0*	*25.5*	*1.5*	*27.0*
6.9	32.1	39.0	8.8	34.2	43.0	*19.0*	*69.0*	*88.0*	*42.0*	*94.0*	*136.0*
9.5	25.9	35.4	9.3	25.0	34.3	*35.5*	*45.0*	*80.5*	*35.5*	*50.0*	*85.5*
11.5	10.0	21.5	12.0	8.0	20.0	*15.0*	*0*	*15.0*	*15.0*	*0*	*15.0*
5.0	1.1	6.1	5.0	1.1	6.1	*17.0*	*5.4*	*22.4*	*17.0*	*5.4*	*22.4*
4.0	3.1	7.1	4.5	3.1	7.6	*11.0*	*5.0*	*16.0*	*12.0*	*5.0*	*17.0*
54.8	35.0	89.8	55.6	35.2	90.8	*88.0*	*41.7*	*129.7*	*92.0*	*41.7*	*133.7*
3.0	0	3.0	3.0	0	3.0	*5.0*	*0*	*5.0*	*5.0*	*0*	*5.0*
112.8	108.3	221.1	116.6	107.8	224.4	*216.0*	*167.6*	*383.6*	*244.0*	*197.6*	*441.6*
6061.9	7604.8	13666.7	6427.5	7811.0	14238.5	*8208.3*	*9744.7*	*17953.0*	*8671.5*	*10222.2*	*18893.7*

TABLE 4:
WORLDWIDE ARTIFICIAL (CELLULOSIC) FIBER PRODUCTION & PRODUCING CAPACITY BY COUNTRY

THOUSAND METRIC TONS

	ACTUAL PRODUCTION								
	1984			1985			1986		
COUNTRY	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
WESTERN EUROPE [a]									
AUSTRIA	14.8	109.0	123.8	14.9	109.0	123.9			123.0
BELGIUM/NETHERLANDS	41.1	0	41.1	42.0	0	42.0			40.0
FINLAND	0	58.0	58.0	0	60.0	60.0			55.0
FRANCE	7.5	19.0	26.5	7.0	15.0	22.0			21.0
GERMANY, FED. REP.	61.0	55.0	116.0	64.0	55.0	119.0	DETAIL NO LONGER AVAILABLE		119.0
GREECE	6.0	0	6.0	7.0	0	7.0			7.7
ITALY	30.6	0	30.6	30.2	0	30.2			30.0
PORTUGAL	1.0	0	1.0	1.0	0	1.0			0.9
SPAIN	7.2	26.1	33.3	7.5	30.0	37.5			37.0
SWEDEN	0	40.1	40.1	0	33.0	33.0			22.1
TURKEY	0.3	4.5	4.8	1.0	7.0	8.0			8.0
UNITED KINGDOM	21.0	106.2	127.2	19.0	60.2	79.2			58.0
TOTAL WESTERN EUROPE	**190.5**	**417.9**	**608.4**	**193.6**	**369.2**	**562.8**	**190.6**	**331.1**	**521.7**
EASTERN EUROPE									
BULGARIA	4.1	37.1	41.2	4.1	37.6	41.7	4.2	38.0	42.2
CZECHOSLOVAKIA	20.5	38.6	59.1	20.9	39.6	60.5	18.0	37.2	55.2
GERMANY, DEM. REP.	35.2	135.0	170.2	35.4	132.4	167.8	35.6	122.1	157.7
HUNGARY	0	7.0	7.0	0	5.5	5.5	0	5.5	5.5
POLAND	19.5	56.0	75.5	20.5	50.6	71.1	19.1	52.9	72.0
ROMANIA	8.5	51.0	59.5	8.8	53.0	61.8	9.0	55.0	64.0
USSR	257.0	345.0	602.0	246.0	340.0	586.0	246.0	343.0	589.0
YUGOSLAVIA	14.0	55.0	69.0	14.9	55.0	69.9	15.1	56.0	71.1
TOTAL EASTERN EUROPE	**358.8**	**724.7**	**1083.5**	**350.6**	**713.7**	**1064.3**	**347.0**	**709.7**	**1056.7**
TOTAL EUROPE	**549.3**	**1142.6**	**1691.9**	**544.2**	**1082.9**	**1627.1**	**537.6**	**1040.8**	**1578.4**

Y Yarn+monofilaments

S Staple+tow+fiberfill

a. Starting in 1986 country detail is no longer available due to disclosure.

These totals do not include data for the Indonesian pilot plant nor production of artificial (cellulosic) fiber in North Korea.

Production and producing capacity by country, divided between rayon and acetate yarn, is given on pages 112 - 113.

Also note page 116 for data on production of cigarette tow.

ACTUAL PRODUCTION						PRODUCING CAPACITY					
1987			1988			3/1989			12/1990		
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
		120.0			132.0			*137.0*			*135.0*
		40.0			41.0			*44.0*			*43.0*
		54.0			60.5			*65.0*			*60.0*
		23.0			15.0			*23.0*			*3.0*
DETAIL NO LONGER AVAILABLE		118.0	DETAIL NO LONGER AVAILABLE		122.0	DETAIL NO LONGER AVAILABLE		*131.0*	DETAIL NO LONGER AVAILABLE		*124.0*
		7.8			6.8			*8.0*			*8.0*
		29.0			32.0			*43.0*			*43.0*
		1.2			0.7			*2.0*			*2.0*
		35.0			37.0			*44.0*			*39.0*
		23.0			20.0			*20.5*			*20.5*
		8.0			8.7			*9.5*			*9.5*
		55.0			64.0			*75.0*			*70.0*
185.0	**329.0**	**514.0**	**188.2**	**351.5**	**539.7**	***217.0***	***385.0***	***602.0***	***208.0***	***349.0***	***557.0***
4.3	29.0	33.3	4.4	24.0	28.4	*5.0*	*42.0*	*47.0*	*5.0*	*42.0*	*47.0*
18.4	36.8	55.2	18.6	37.0	55.6	*27.0*	*46.0*	*73.0*	*27.0*	*70.0*	*97.0*
35.9	120.7	156.6	36.3	124.8	161.1	*39.0*	*160.0*	*199.0*	*39.0*	*173.0*	*212.0*
0	4.1	4.1	0	4.9	4.9	*10.0*	*10.0*	*20.0*	*10.0*	*10.0*	*20.0*
19.3	54.0	73.3	20.4	54.0	74.4	*32.0*	*71.5*	*103.5*	*32.0*	*85.0*	*117.0*
9.0	57.0	66.0	9.1	66.5	75.6	*11.0*	*95.0*	*106.0*	*11.0*	*95.0*	*106.0*
246.5	345.0	591.5	263.8	337.2	601.0	*290.0*	*353.0*	*643.0*	*290.0*	*353.0*	*643.0*
13.3	50.0	63.3	14.0	54.0	68.0	*17.0*	*60.0*	*77.0*	*17.0*	*60.0*	*77.0*
346.7	**696.6**	**1043.3**	**366.6**	**702.4**	**1069.0**	***431.0***	***837.5***	***1268.5***	***431.0***	***888.0***	***1319.0***
531.7	**1025.6**	**1557.3**	**554.8**	**1053.9**	**1608.7**	***648.0***	***1222.5***	***1870.5***	***639.0***	***1237.0***	***1876.0***

TABLE 4:
WORLDWIDE ARTIFICIAL (CELLULOSIC) FIBER PRODUCTION & PRODUCING CAPACITY BY COUNTRY *(CONTINUED)*

THOUSAND METRIC TONS

COUNTRY	ACTUAL PRODUCTION								
	1984			1985			1986		
	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
U.S.A.	108.4	176.7	285.1	92.8	160.2	253.0	97.4	183.3	280.7
CANADA	10.0	33.9	43.9	8.0	26.9	34.9	8.8	29.1	37.9
OTHER AMERICAS									
ARGENTINA	1.8	1.5	3.3	1.5	1.5	3.0	3.0	4.9	7.9
BRAZIL	17.7	29.0	46.7	20.1	26.5	46.6	16.8	33.6	50.4
CHILE	1.2	3.7	4.9	1.3	3.8	5.1	1.3	3.9	5.2
COLOMBIA	1.8	0	1.8	1.8	0	1.8	1.8	0	1.8
CUBA	2.0	3.5	5.5	2.1	6.4	8.5	2.6	8.7	11.3
MEXICO	11.6	4.0	15.6	12.6	0	12.6	12.0	0	12.0
PERU	1.7	0	1.7	1.7	0	1.7	0.8	0	0.8
URUGUAY	1.0	0	1.0	1.0	0	1.0	1.3	0	1.3
VENEZUELA	1.9	0	1.9	2.1	0	2.1	1.5	0	1.5
TOTAL OTHER AMERICAS	40.7	41.7	82.4	44.2	38.2	82.4	41.1	51.1	92.2
JAPAN	110.8	266.6	377.4	104.6	283.3	387.9	102.8	217.2	320.0
CHINA, PRC	45.0	108.0	153.0	50.0	130.0	180.0	60.0	130.0	190.0
OTHER ASIA									
BANGLADESH	1.0	1.0	2.0	1.0	1.0	2.0	1.1	1.1	2.2
INDIA	41.7	100.1	141.8	46.9	95.0	141.9	49.6	90.4	140.0
INDONESIA	0	36.6	36.6	0	40.7	40.7	0	46.1	46.1
KOREA, REP. OF	12.8	0	12.8	13.8	0	13.8	13.9	0	13.9
PAKISTAN	3.1	0	3.1	3.2	0	3.2	3.2	0	3.2
TAIWAN	2.5	125.5	128.0	2.4	119.5	121.9	2.8	117.1	119.9
THAILAND	0	18.0	18.0	0	19.0	19.0	0	19.0	19.0
TOTAL OTHER ASIA	61.1	281.2	342.3	67.3	275.2	342.5	70.6	273.7	344.3
MIDDLE EAST, AFRICA & OCEANIA									
EGYPT	7.0	4.6	11.6	7.0	4.7	11.7	7.0	4.7	11.7
IRAQ	3.0	5.5	8.5	3.0	5.5	8.5	3.0	5.5	8.5
TOTAL M.E., A & O	10.0	10.1	20.1	10.0	10.2	20.2	10.0	10.2	20.2
TOTAL WORLD	935.3	2060.8	2996.1	921.1	2006.9	2928.0	928.3	1935.4	2863.7

ACTUAL PRODUCTION						PRODUCING CAPACITY					
1987			1988			3/1989			12/1990		
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
86.7	187.9	274.6	97.0	181.6	278.6	*110.7*	*215.9*	*326.6*	*115.2*	*223.6*	*338.8*
8.5	28.5	37.0	9.3	32.8	42.1	*14.5*	*38.0*	*52.5*	*14.5*	*38.0*	*52.5*
3.0	2.5	5.5	3.0	0	3.0	*10.8*	*5.0*	*15.8*	*10.8*	*5.0*	*15.8*
15.0	33.9	48.9	14.9	36.6	51.5	*21.1*	*41.7*	*62.8*	*21.1*	*41.7*	*62.8*
1.3	4.0	5.3	1.3	4.1	5.4	*1.5*	*5.4*	*6.9*	*1.5*	*5.4*	*6.9*
2.3	0	2.3	2.4	0	2.4	*3.5*	*0*	*3.5*	*3.5*	*0*	*3.5*
1.6	8.8	10.4	0.7	8.9	9.6	*3.0*	*9.0*	*12.0*	*3.0*	*9.0*	*12.0*
12.3	0	12.3	12.5	0	12.5	*15.8*	*0*	*15.8*	*15.8*	*0*	*15.8*
1.1	0	1.1	1.3	0	1.3	*1.7*	*0*	*1.7*	*1.7*	*0*	*1.7*
1.2	0	1.2	1.3	0	1.3	*1.9*	*0*	*1.9*	*1.9*	*0*	*1.9*
2.2	0	2.2	2.2	0	2.2	*2.4*	*0*	*2.4*	*2.4*	*0*	*2.4*
40.0	49.2	89.2	39.6	49.6	89.2	*61.7*	*61.1*	*122.8*	*61.7*	*61.1*	*122.8*
99.4	201.1	300.5	99.8	190.8	290.6	*128.3*	*214.9*	*343.2*	*118.2*	*214.9*	*333.1*
61.0	132.0	193.0	50.0	110.0	160.0	*130.0*	*160.0*	*290.0*	*130.0*	*160.0*	*290.0*
1.3	1.3	2.6	1.2	1.1	2.3	*1.5*	*5.0*	*6.5*	*1.5*	*5.0*	*6.5*
50.7	116.8	167.5	52.6	121.5	174.1	*78.9*	*136.1*	*215.0*	*78.9*	*136.1*	*215.0*
0	49.9	49.9	0	51.4	51.4	*0*	*67.0*	*67.0*	*0*	*67.0*	*67.0*
14.1	0	14.1	15.2	0	15.2	*17.0*	*28.1*	*45.1*	*17.0*	*28.1*	*45.1*
3.3	0	3.3	3.3	0	3.3	*3.3*	*0*	*3.3*	*3.3*	*0*	*3.3*
2.4	117.2	119.6	2.6	123.2	125.8	*4.0*	*149.4*	*153.4*	*4.0*	*149.4*	*153.4*
0	21.4	21.4	0	24.0	24.0	*0*	*30.0*	*30.0*	*0*	*30.0*	*30.0*
71.8	306.6	378.4	74.9	321.2	396.1	*104.7*	*415.6*	*520.3*	*104.7*	*415.6*	*520.3*
7.0	4.8	11.8	7.0	5.0	12.0	*7.0*	*5.4*	*12.4*	*7.0*	*5.4*	*12.4*
3.1	5.5	8.6	2.9	5.5	8.4	*3.5*	*6.5*	*10.0*	*3.5*	*6.5*	*10.0*
10.1	10.3	20.4	9.9	10.5	20.4	*10.5*	*11.9*	*22.4*	*10.5*	*11.9*	*22.4*
909.2	1941.2	2850.4	935.3	1950.4	2885.7	*1208.4*	*2339.9*	*3548.3*	*1193.8*	*2362.1*	*3555.9*

TABLE 5:
WORLDWIDE RAYON VS. ACETATE FILAMENT YARN PRODUCTION & PRODUCING CAPACITY BY COUNTRY
THOUSAND METRIC TONS

COUNTRY	ACTUAL PRODUCTION								
	1984			1985			1986		
	H	R&C	A	H	R&C	A	H	R&C	A
WESTERN EUROPE									
AUSTRIA	10	5	0	10	5	0			
BELGIUM/NETHERLANDS	18	16	7	18	17	7			
FRANCE	0	7	0	0	7	0		DETAIL	
GERMANY, FED. REP. OF	40	21	0	40	24	0		NO	
ITALY [a]	11	2	18	10	2	18		LONGER	
SPAIN	+	4	3	+	4	3		AVAILABLE	
UNITED KINGDOM	0	0	21	0	0	19			
OTHER [b]	0	7	0	0	9	0			
TOTAL WESTERN EUROPE	79	62	49	78	68	47	71	69	51
EASTERN EUROPE									
BULGARIA	0	4	0	0	4	0	0	4	0
CZECHOSLOVAKIA	8	12	0	8	13	0	8	10	0
GERMANY, DEM. REP.	13	22	0	14	22	0	14	22	0
HUNGARY	0	0	0	0	0	0	0	0	0
POLAND	5	15	0	5	15	0	5	14	0
ROMANIA	5	3	0	5	4	0	5	4	0
USSR [a]	120	80	57	116	80	50	116	80	50
YUGOSLAVIA	7	7	0	8	7	0	8	8	0
TOTAL EASTERN EUROPE	158	143	57	156	145	50	156	142	50
U.S.A.	13	6	90	9	6	78	7	6	84
CANADA	0	0	10	0	0	8	0	0	9
OTHER AMERICAS									
ARGENTINA	0	0	2	0	0	2	0	0	3
BRAZIL	4	12	2	4	15	1	1	15	0
CHILE	0	1	0	0	1	0	0	1	0
COLOMBIA	0	0	2	0	0	2	0	0	2
CUBA	2	0	0	2	0	0	3	0	0
MEXICO	2	3	6	3	3	7	2	3	7
PERU	0	0	2	0	0	2	0	0	1
URUGUAY	0	0	1	0	0	1	0	0	1
VENEZUELA	0	0	2	0	0	2	0	0	2
TOTAL OTHER AMERICAS	8	16	17	9	19	17	6	19	16
JAPAN [a]	2	78	31	2	74	28	2	74	27
CHINA, PRC	0	45	0	0	50	0	0	60	0
OTHER ASIA									
BANGLADESH	0	1	0	0	1	0	0	1	0
INDIA	8	33	1	7	40	+	5	44	+
KOREA, REP. OF	0	11	2	0	12	2	0	12	2
PAKISTAN	0	0	3	0	0	3	0	0	3
TAIWAN	0	2	0	0	2	0	0	3	0
TOTAL OTHER ASIA	8	47	6	7	55	5	5	60	5
OTHER M.E., A & O [c]	0	10	0	0	10	0	0	10	0
WORLD TOTAL	268	407	260	261	427	233	247	440	242

H High tenacity (tire & industrial type) viscose rayon yarn
R Regular + intermediate tenacity viscose rayon yarn
C Cuprammonium rayon yarn
A Acetate + triacetate yarn
a. Produces both regular + intermediate rayon yarn and cuprammonium rayon yarn
b. Comprises Greece, Portugal and Turkey
c. Comprises Egypt and Iraq

ACTUAL PRODUCTION						PRODUCING CAPACITY					
1987			1988			3/1989			12/1990		
H	R&C	A	H	R&C	A	H	R&C	A	H	R&C	A
DETAIL NO LONGER AVAILABLE			DETAIL NO LONGER AVAILABLE			DETAIL NO LONGER AVAILABLE			DETAIL NO LONGER AVAILABLE		
67	70	48	74	62	52	*85*	*77*	*55*	*79*	*74*	*55*
0	4	0	0	4	0	*0*	*5*	*0*	*0*	*5*	*0*
8	10	0	8	10	0	*11*	*16*	*0*	*11*	*16*	*0*
14	22	0	14	22	0	*15*	*24*	*0*	*15*	*24*	*0*
0	0	0	0	0	0	*0*	*10*	*0*	*0*	*10*	*0*
5	15	0	5	15	0	*9*	*23*	*0*	*9*	*23*	*0*
5	4	0	6	4	0	*6*	*5*	*0*	*6*	*5*	*0*
117	80	50	119	85	60	*120*	*100*	*70*	*120*	*100*	*70*
6	7	0	7	8	0	*8*	*9*	*0*	*8*	*9*	*0*
155	**142**	**50**	**159**	**148**	**60**	***169***	***192***	***70***	***169***	***192***	***70***
7	**6**	**74**	**7**	**6**	**84**	***23***	***6***	***82***	***23***	***6***	***86***
0	**0**	**9**	**0**	**0**	**9**	***0***	***0***	***15***	***0***	***0***	***15***
0	0	3	0	0	3	*2*	*6*	*3*	*2*	*6*	*3*
0	15	0	0	15	0	*2*	*17*	*2*	*2*	*17*	*2*
0	1	0	0	1	0	*0*	*1*	*0*	*0*	*1*	*0*
0	0	2	0	0	2	*0*	*0*	*4*	*0*	*0*	*4*
2	0	0	1	0	0	*3*	*0*	*0*	*3*	*0*	*0*
2	3	7	2	3	8	*3*	*4*	*9*	*3*	*4*	*9*
0	0	1	0	0	1	*0*	*0*	*2*	*0*	*0*	*2*
0	0	1	0	0	1	*0*	*0*	*2*	*0*	*0*	*2*
0	0	2	0	0	2	*0*	*0*	*2*	*0*	*0*	*2*
4	**19**	**16**	**3**	**19**	**17**	***10***	***28***	***24***	***10***	***28***	***24***
2	**71**	**27**	**1**	**72**	**27**	***10***	***84***	***34***	***0***	***84***	***34***
0	**61**	**0**	**0**	**50**	**0**	***30***	***100***	***0***	***30***	***100***	***0***
0	1	0	0	1	0	*0*	*2*	*0*	*0*	*2*	*0*
5	46	+	9	44	0	*21*	*54*	*4*	*21*	*54*	*4*
0	12	2	0	12	3	*0*	*12*	*5*	*0*	*12*	*5*
0	0	3	0	0	3	*0*	*0*	*3*	*0*	*0*	*3*
0	2	0	0	3	0	*0*	*4*	*0*	*0*	*4*	*0*
5	**61**	**5**	**9**	**60**	**6**	***21***	***72***	***12***	***21***	***72***	***12***
0	**10**	**0**	**0**	**10**	**0**	***0***	***10***	***0***	***0***	***10***	***0***
240	**440**	**229**	**253**	**427**	**255**	***348***	***569***	***292***	***332***	***566***	***296***

TABLE 6:
WORLDWIDE SYNTHETIC (NONCELLULOSIC) FIBER PRODUCTION & PRODUCING CAPACITY BY FIBER EXCEPT OLEFIN

THOUSAND METRIC TONS

FIBER & AREA	ACTUAL PRODUCTION								
	1984			1985			1986		
	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL
ACRYLIC+MODACRYLIC									
WEST EUROPE	1	844	845	1	901	902	1	912	913
EAST EUROPE	0	223	223	0	245	245	0	257	257
U S A	0	304	304	0	286	286	0	279	279
CANADA	0	0	0	0	0	0	0	0	0
OTHER AMERICAS	0	140	140	0	134	134	0	154	154
JAPAN	2	367	369	2	380	382	3	394	397
CHINA, PRC	0	69	69	0	73	73	0	74	74
OTHER ASIA	0	314	314	0	319	319	0	327	327
MIDDLE EAST, AFRICA & OCEANIA	0	12	12	0	16	16	0	18	18
TOTAL	**3**	**2273**	**2276**	**3**	**2354**	**2357**	**4**	**2415**	**2419**
NYLON+ARAMID [a]									
WEST EUROPE	503	144	647	530	152	682	517	141	658
EAST EUROPE	527	86	613	539	93	632	559	99	658
U S A	716	379	1095	687	375	1062	728	412	1140
CANADA	52	14	66	54	12	66	54	14	68
OTHER AMERICAS	158	10	168	175	8	183	170	11	181
JAPAN	288	19	307	291	24	315	260	19	279
CHINA, PRC	57	1	58	70	1	71	74	1	75
OTHER ASIA	344	3	347	367	5	372	387	4	391
MIDDLE EAST, AFRICA & OCEANIA	51	2	53	56	2	58	57	2	59
TOTAL	**2696**	**658**	**3354**	**2769**	**672**	**3441**	**2806**	**703**	**3509**
POLYESTER									
WEST EUROPE	431	462	893	451	466	917	447	479	926
EAST EUROPE	187	383	570	207	409	616	239	429	668
U S A	544	994	1538	599	917	1516	532	968	1500
CANADA	18	45	63	21	46	67	21	50	71
OTHER AMERICAS	208	177	385	205	176	381	208	179	387
JAPAN	327	320	647	329	323	652	322	310	632
CHINA, PRC	35	320	355	55	443	498	70	456	526
OTHER ASIA	697	763	1460	842	858	1700	968	1014	1982
MIDDLE EAST, AFRICA & OCEANIA	46	72	118	54	73	127	51	80	131
TOTAL	**2493**	**3536**	**6029**	**2763**	**3711**	**6474**	**2858**	**3965**	**6823**
OTHER FIBERS EXCEPT OLEFIN [b]									
WEST EUROPE	6	9	15	6	9	15	5	9	14
EAST EUROPE	1	4	5	1	3	4	1	3	4
U S A	+	+	+	+	+	+	+	+	+
CANADA	+	0	+	+	0	+	+	0	+
OTHER AMERICAS	1	0	1	1	0	1	1	0	1
JAPAN	17	29	46	23	30	53	20	27	47
CHINA, PRC	7	70	77	10	80	90	10	63	73
OTHER ASIA	+	1	1	+	1	1	+	1	1
MIDDLE EAST, AFRICA & OCEANIA	0	0	0	0	0	0	0	0	0
TOTAL	**32**	**113**	**145**	**41**	**123**	**164**	**37**	**103**	**140**
TOTAL FIBERS ABOVE									
WEST EUROPE	941	1459	2400	988	1528	2516	970	1541	2511
EAST EUROPE	715	696	1411	747	750	1497	799	788	1587
U S A	1260	1677	2937	1286	1573	2864	1260	1659	2919
CANADA	70	59	129	75	58	133	75	64	139
OTHER AMERICAS	367	327	694	381	318	699	379	344	723
JAPAN	634	735	1369	645	757	1402	605	750	1355
CHINA, PRC	99	460	559	135	597	732	154	594	748
OTHER ASIA	1041	1081	2122	1209	1183	2392	1355	1346	2701
MIDDLE EAST, AFRICA & OCEANIA	97	86	183	110	91	201	108	100	208
WORLD TOTAL	**5224**	**6580**	**11804**	**5576**	**6860**	**12436**	**5705**	**7186**	**12891**

Y Yarn+monofilaments
S Staple+tow+fiberfill
+ Nominal quantities

a. U.S.A. nylon producing capacity data do not include aramid.
b. Other fibers are alginate, azlon, spandex or elastomer, saran, TFE-fluorocarbon, vinal and vinyon. U.S.A. production data do not include spandex.

ACTUAL PRODUCTION						PRODUCING CAPACITY						% UTILIZATION [c]	
1987			1988			3/1989			12/1990				
Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S	TOTAL	Y	S
1	919	920	1	904	905	1	1044	1045	1	1054	1055	100.0	87.2
0	271	271	0	274	274	0	396	396	0	436	436	0	72.5
0	268	268	0	267	267	0	291	291	0	294	294	0	92.4
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	180	180	0	179	179	0	213	213	0	235	235	0	84.5
3	404	407	3	395	398	6	442	448	6	442	448	50.0	93.2
0	75	75	0	85	85	0	125	125	0	200	200	0	62.0
0	344	344	0	351	351	0	418	418	0	456	456	0	84.8
0	20	20	0	17	17	0	20	20	0	25	25	0	71.4
4	**2481**	**2485**	**4**	**2472**	**2476**	**7**	**2949**	**2956**	**7**	**3142**	**3149**	**57.1**	**84.7**
518	137	655	523	147	670	655	193	848	674	184	858	78.7	70.6
579	100	679	592	102	694	684	120	804	704	120	824	86.9	83.3
770	450	1220	784	427	1211	877	519	1396	923	525	1448	89.9	87.2
51	13	64	54	13	67	97	24	121	97	24	121	53.7	54.2
165	10	175	160	10	170	273	23	296	273	23	296	62.1	44.4
262	17	279	267	15	282	323	27	350	323	27	350	80.5	63.0
79	1	80	100	0	100	110	5	115	119	10	129	79.0	20.0
429	6	435	470	6	476	590	8	598	631	32	663	74.0	60.0
60	2	62	62	2	64	101	4	105	105	4	109	57.1	57.1
2913	**736**	**3649**	**3012**	**722**	**3734**	**3710**	**923**	**4633**	**3849**	**949**	**4798**	**80.0**	**81.1**
451	481	932	462	514	976	607	592	1199	633	632	1265	75.7	80.1
263	473	736	283	483	766	337	656	993	351	722	1073	78.0	71.9
535	1071	1606	557	1112	1669	624	1188	1812	604	1098	1702	87.3	91.5
20	45	65	21	45	66	27	53	80	27	53	80	74.1	84.9
227	195	422	232	200	432	307	289	596	335	320	655	74.7	69.1
323	283	606	329	293	622	468	370	838	468	370	838	69.6	75.2
120	496	616	180	525	705	320	675	995	320	675	995	46.1	80.1
1116	1150	2266	1256	1244	2500	1630	1711	3341	1882	1898	3780	77.0	74.6
53	87	140	55	89	144	115	144	259	140	169	309	52.2	63.3
3108	**4281**	**7389**	**3375**	**4505**	**7880**	**4435**	**5678**	**10113**	**4760**	**5937**	**10697**	**75.3**	**79.2**
5	9	14	5	9	14	8	12	20	8	12	20	62.5	75.0
1	3	4	1	3	4	1	8	9	1	8	9	100.0	37.5
+	+	+	+	+	+	+	+	+	+	+	+	0	0
+	0	+	+	0	+	+	0	+	+	0	+	0	0
1	0	1	1	0	1	1	0	1	1	0	1	66.7	0
20	28	48	20	30	50	30	99	129	30	99	129	66.7	30.3
10	65	75	10	68	78	15	75	90	15	75	90	66.7	86.7
0	2	2	0	2	2	1	0	1	1	0	1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	**107**	**144**	**37**	**112**	**149**	**56**	**194**	**250**	**56**	**194**	**250**	**54.0**	**57.7**
975	1546	2521	991	1574	2565	1271	1841	3112	1316	1882	3198	77.8	83.5
843	847	1690	876	862	1738	1022	1180	2202	1056	1286	2342	83.3	73.0
1305	1789	3094	1341	1806	3147	1501	1938	3499	1527	1917	3444	87.8	91.7
71	58	129	75	58	133	124	77	201	124	77	201	57.3	75.3
393	385	778	393	389	782	581	525	1106	609	578	1187	61.8	72.0
608	732	1340	619	703	1322	827	938	1765	827	938	1765	74.1	79.1
209	637	846	290	678	968	445	880	1325	454	960	1414	63.7	73.6
1545	1502	3047	1726	1603	3329	2221	2137	4358	2514	2386	4900	75.9	76.7
113	109	222	117	108	225	216	168	384	245	198	443	54.3	70.3
6062	**7605**	**13667**	**6428**	**7811**	**14239**	**8208**	**9744**	**17952**	**8672**	**10222**	**18894**	**77.3**	**76.4**

c. Based on 1988 production and an average March 1988 and March 1989 producing capacity. Refer to June 1988 ***Textile Organon*** for March 1988 producing capacity.

The regional totals here are the same as those on pages 104 - 107

TABLE 7:
WORLDWIDE GLASS FIBER
PRODUCTION & PRODUCING CAPACITY
THOUSAND METRIC TONS

COUNTRY	PRODUCTION					CAPACITY	
	1984	1985	1986	1987	1988	3/89	12/90
WEST EUROPE EAST EUROPE [a]	300	320	364	407	465	*440* *100*	*500* *110*
U S A	632	610	630	725	730	*806*	*875*
OTHER AMERICAS	39	32	35	50	65	*78*	*78*
JAPAN	249	273	240	300	340	*350*	*357*
MIDDLE EAST, AFRICA & OCEANIA [b]	14	28	30	35	55	*65*	*130*
TOTAL ABOVE	**1234**	**1263**	**1299**	**1517**	**1655**	***1839***	***2050***
CHINA, P R C	40	50	50	55	65	*95*	*100*
U S S R	75	85	100	110	125	*185*	*200*

Glass fiber is defined on page 118 of this issue. The glass fiber producing capacity, is based on March 1989 and December 1990 annual projections.

a. The data for East Europe do not include estimates for the U S S R.

b. The Other Asia, Africa & Oceania countries are Australia, India, Korea, Rep. of, South Africa and Taiwan.

TABLE 8:
ESTIMATED WORLDWIDE
CIGARETTE TOW PRODUCTION
THOUSAND METRIC TONS

AREA	1984	1985	1986	1987	1988
EUROPE [a]	80	83	104	107	124
U S A OTHER AMERICAS [b]	187	210	216	247	249
ASIA [c]	47	44	42	46	49
WORLD TOTAL	**314**	**337**	**362**	**400**	**422**

a. Belgium, Germany, Fed. Rep., U S S R. & United Kingdom.

b. Brazil, Canada, Colombia, Mexico & Venezuela.

c. Japan and Korea, Rep. of.

TABLE 9:
WORLDWIDE OLEFIN FIBER PRODUCTION
THOUSAND METRIC TONS

COUNTRY	1984	1985	1986	1987	1988
WEST EUROPE					
AUSTRIA	21	24	26	27	30
BENELUX	97	120	141	160	170
DENMARK	14	25	26	30	31
FINLAND	14	24	24	18	20
FRANCE	29	50	55	58	61
GREECE/CYPRUS	11	14	15	16	20
GERMANY, FED. REP.	91	99	104	115	125
IRELAND	9	9	9	10	10
ITALY	91	127	130	130	135
NORWAY	4	4	4	5	5
PORTUGAL	30	30	30	36	36
SPAIN	37	37	41	49	54
SWEDEN	4	6	6	6	7
SWITZERLAND	8	14	17	20	23
TURKEY	6	6	6	7	7
UNITED KINGDOM	90	95	110	125	130
TOTAL WEST EUROPE	556	684	744	812	864
EAST EUROPE					
CZECHOSLOVAKIA	12	12	12	12	12
HUNGARY	16	17	20	22	25
POLAND	16	16	17	17	17
U.S.S.R.	20	22	24	24	25
U.S.A.					
YARN+MONOFIL	175	192	213	224	249
STAPLE	113	137	152	164	165
FILM FIBER	154	233	263	299	288
CANADA	45	48	55	61	62
OTHER AMERICAS					
ARGENTINA	17	15	19	24	27
BRAZIL	39	39	40	40	41
CHILE	4	5	6	7	7
EL SALVADOR, GUATEMALA, HONDURAS	3	3	3	3	3
MEXICO	26	26	27	27	28
NICARAGUA	1	1	1	1	1
PERU	6	6	7	7	7
URUGUAY	2	2	2	2	2
JAPAN					
YARN+MONOFIL	14	14	11	14	16
STAPLE	32	35	37	36	38
FILM FIBER	NA	NA	NA	NA	NA
OTHER ASIA					
KOREA, REP. OF	1	1	0	0	0
PHILIPPINES	3	3	3	3	3
TAIWAN	63	71	77	78	79
MIDDLE EAST, AFRICA & OCEANIA					
AUSTRALIA	22	23	25	26	28
SOUTH AFRICA	5	5	5	5	5
OTHER	1	1	1	1	1

The olefin data shown include the "official" country data published by a government, an association or other statistical agency as well as an estimate of the olefin fiber, mainly slit and split film fiber, believed to have been produced in the country. For example: although U.S. olefin production data include yarn, monofil, staple, film fiber, and spunbonded polypropylene, published Italian and Japanese olefin data show the production of yarn+monofilaments and staple+tow but no data on production of film fiber, such as that used in sacks, fishing nets, and carpet backing. Estimates were made in the latter example.

Due to the inconsistencies in olefin production reporting, we have made no attempt to show a worldwide total.

1989 WORLDWIDE DIRECTORY OF MANUFACTURED FIBER PRODUCERS

NOTES & DEFINITIONS

This directory of producers lists each country separately and is divided into the following categories:

(1) Artificial (Cellulosic) plus Synthetic (Noncellulosic) fibers
(2) Olefin fiber
(3) Glass fiber

The locality shown represents a plant site.

The generic fiber names used in this survey are those established by the U.S. Federal Trade Commission (FTC). The *italicized* words are trademarks. All other fiber names are generic and appear in regular type.

• Indicates a company producing olefin fiber as well as other manufactured fiber(s). For example, Mitsubishi Rayon Co. produces olefin fiber in Japan as well as acrylic and polyester. The acrylic and polyester entries for this company are in one section and the olefin entry is shown in the Olefin fiber section.

* Indicates a new plant, in the planning stage or under construction, or a new facility for producing a new product at an existing plant. Such facilities are not expected to be operable until 1990 or later.

Yarn means filament yarn.
Monofil means an extruded monofilament and may be either a round or rectangular (ribbon) cross-section. Monofilaments for bristles are excluded.
Film includes **Slit**: tape produced by slitting an already attenuated wide sheet of olefin film, and **Split:** fibrillated slit film. ***Not included*** in this survey is the slit film used for decorative or tying ribbon and such.
Captive means that most or all of the fiber produced is consumed by the company in a vertical operation.

GENERIC NAMES & TRADEMARKS

The following are generic names, in bold type, and a brief description of the fibers covered by each name is shown in regular type.

GLASS FIBER

This fiber is made in two primary forms: continuous strand and staple sliver. Continuous strand is drawn fiber (i.e., from a textile-type bushing), while staple sliver, which is produced in relatively small amounts, is a blown fiber.

Glass fiber is produced and sold as filament yarn, strand, roving, mat, chopped strand, milled fiber and staple yarn & sliver. In addition, there are two primary uses for glass fiber: Textile, used by textile mills in conventional constructions (e.g., drapery and tire cord) or Non-Textile, used for nonconventional constructions (e.g., reinforced plastics and roofing shingles).

For additional information, see the definitions on page 239 of the November 1988 ***Textile Organon***.

ARTIFICIAL (CELLULOSIC) FIBERS

Acetate: Cellulose acetate. Cigarette filtration tow is excluded.
Triacetate: Cellulose acetate, wherein not less than 92% of the hydroxyl groups are acetylated.
Rayon: Regenerated cellulose, including substitutions for not more than15% of the hydrogens of the hydroxyl groups. Includes high wet modulus fiber.
Cupra: Cuprammonium rayon.
The viscose rayon yarns are identified as **ind** (industrial or high tenacity yarn) and **reg** (regular or textile yarn).

SYNTHETIC (NONCELLULOSIC) FIBERS

Acrylic: At least 85% acrylonitrile by weight.
Modacrylic: 35% to 84% acrylonitrile by weight, except when it qualifies as rubber.
Azlon: Regenerated natural protein.
Nylon: A long-chain synthetic polyamide in which less than 85% of the amide linkages are attached directly to two aromatic rings. The types are identified as 6, 66, etc. Where a company produces both type 6 and 66, the designation 6/66 is used.
Aramid: A long-chain synthetic polyamide in which at least 85% of the amide linkages are attached directly to two aromatic rings.
Olefin: At least 85% ethylene, propylene or other olefin units by weight, except amorphous (noncrystalline) polyolefins qualifying as rubber. **E** means Polyethylene and **P** means Polypropylene. Also see adjoining notes on olefin fiber.
Polyester: At least 85% by weight of an ester of a substituted aromatic carboxylic acid, including but not restricted to substituted terephthalate units, and parasubstituted hydroxybenzoate units.
Saran: At least 80% vinylidene chloride by weight.
Spandex: At least 85% of segmented polyurethane.
Vinal: At least 50% by weight vinyl alcohol and wherein the vinyl alcohol plus acetal units are at least 85% by weight.
Vinyon: At least 85% vinyl chloride by weight.

Other manufactured fibers included in this survey, but not listed by the FTC, are **Polycarbonate** (U.S.A.), **Polychlal** (Japan), **Promix** (Japan) and **TFE-&FEP-fluorocarbon** (Fluoro)(Japan, U.S.A. & U.S.S.R.).

Not covered in this survey are fibers which would fall under the FTC's generic designations of rubber, lastrile, metallic and novoloid. Fibers falling under the FTC designations of anidex and nytril are no longer produced.

Carbon fibers are not included in this survey.

International Standard #2076, "Generic Names of Man-Made Fibres," as established by the International Organization for Standardization, lists some 23 names, of which the following are similar to the FTC designations: cupro, viscose, acetate, triacetate, acrylic, modacrylic, nylon or polyamide, polyester and glass. The IOS also lists modal (regenerated cellulose obtained by processes giving a high tenacity and a high wet modulus), alginate (metallic salts of alginic acid), chlorofibre (similar to the FTC's saran and vinyon), elastane (similar to the FTC's spandex), elastodiene, fluorofibre, polycarbamide, polyethylene & polypropylene (similar to the FTC's olefin), polyurethane, trivinyl and vinylal (similar to the FTC's vinal).

ALBANIA

(Producer not yet known)
Acrylic (staple)
Polyester (yarn & staple)

ARGENTINA

COAFI S.A.
Polyester Buenos Aires (yarn)

DUCILO S.A.I.C.
Nylon 66 Berazategui & Mercedes *Nylon Ducilo* (yarn)
Spandex Mercedes (fused multifil or coalesced monofil)

HISISA ARGENTINA S.A.I.C.I.F.
Acrylic Baradero *Cashmilon* (staple)

MANUFACTURAS DE FIBRAS SYNTETICAS (formerly Petroquimica Sudamericana)
Nylon 6 Olmos *Lapi* (yarn)
Polyester Olmos *Lapi* (yarn & staple)

MITEXTIL S.A.
Nylon 6 Buenos Aires (yarn)

M. NAHMIAS S.A.C.I.
Polyester Buenos Aires (yarn)

NICIEZA y TAVERNA HNOS. S.A.
Nylon 6 Chivilcoy *Grilon* (monofil)

RHODIA ARGENTINA QUIMICA e TEXTIL
Acetate Quilmes (yarn)
Polyester Quilmes *Tergal* (yarn)

SOCIEDAD NUEVAS INDUSTRIAS ARGENTINAS FIBRAS ARTIFICIALES S.A.I.C.F.I. (SNIAFA)
Nylon 6 Hernández La Plata *Snialon* (yarn)

SUDAMTEX S.A. TEXTIL SUDAMERICANA
Polyester Azul *Acrocel* (staple)

VALENCIANA ARGENTINA S.A.
Nylon 6 Buenos Aires (yarn)

OLEFIN FIBER

AGAPOL S.A. (P yarn)

MANUFACTURA FORTI ARGENTINA S.A.C.I.A.F.I. Buenos Aires (P yarn & staple)

PANAMERICA DE PLASTICOS S.A.I.C. Olivos (P staple)

PETROQUIMICA Cuyo, Mondoza (P yarn)

TEXTILYUTE S.A.I.C. Isidro Casanova (P film)

VINISA S.A.I.C. Buenos Aires *Rafistal, Strofil* (E & P monofil)

ARGENTINA (continued)

GLASS FIBER

VIDRIERIA ARGENTINA S.A. (VASA) Llavallol *Texover*

AUSTRALIA

FIBREMAKERS LTD.
Biconstituent Mulgrave, Victoria *Front Runner* (melded fabric)
Nylon 66 Bayswater, Victoria *Bri Nylon* (yarn & monofil), Penrith, N.S.W. (tire cord)
Polyester Bayswater *Terylene* (yarn, staple & tow)

UNITED CARPET MILLS PTY. LTD.
Nylon 6 Thomastown, Victoria *Unilon* (yarn)
Polyester Thomastown (yarn)

In addition to the above, VILENE AUSTRALIA reportedly produces spunbonded products at Minto, N.S.W., these are believed to be principally based on cellulosic fiber, but some polypropylene may be used.

OLEFIN FIBER

SARLON INDUSTRIES PTY. LTD. Punchbowl, N.S.W. (E & P monofil & film)

OLEFIN FILM FIBER, only

A. ABRAHAMS & SONS PTY. LTD. Clayton, Victoria (*Koala, Polytex*)

AMOCO FABRICS & FIBERS COMPANY, PATCHOGUE PLYMOUTH DIVISION Liverpool, N.S.W. *Poly Bac, Propex*

CORDEX INDUSTRIES PTY. LTD. Gladesville, N.S.W.

GEO. KINNEAR & SONS PTY. LTD. Footscray, Victoria (*Emu*)

H. J. PENNO Adelaide, South Australia

TAPEX PTY. LTD. Sydney, N.S.W.

GLASS FIBER

ACI FIBREGLASS, A Unit of ACI Australia, Ltd. Dandenong, Victoria

AUSTRIA

AUSTRIA FASERWERKE G.m.b.H.
Polyester Lenzing *Trevira* (staple)

AUSTRIA (continued)

GLANZSTOFF AUSTRIA A.G. (formerly Enka-Austria)
Rayon — St. Pölten (ind & reg yarn)

LENZING A.G. •

Rayon — Lenzing: *Lenzing Viscose* (staple)
Lenzing: *Modal* (staple)
Fluoro — Lenzing: *Lenzing PTFE* (yarn & staple)
Polyimid — Lenzing*: *P84* (yarn & staple)

OLEFIN FIBER

CHEMIE LINZ A.G.: Linz: *Asota, Linz PP Multifil, Linz PP Viles* (P yarn: staple & spunbonded)

LENZING A.G.: Lenzing (P yarn)

M. TEUFELBERGER: Wels

OLEFIN FILM FIBER, only

SEUTTER: Unter Eggendorf

BANGLADESH

ASHUGANJ PETROCHEMICAL COMPLEX
Acrylic — Ashuganj (staple)

BANGLADESH CHEMICAL INDUSTRIES
Rayon — (staple)

KARNAPHULI RAYON AND CHEMICALS LIMITED
Rayon — Chandraghona, Chittagong (reg yarn & staple)

PYLON INDUSTRIES LIMITED
Nylon 6 — Fouzdarhat Industrial Estate, Chittagong: *Pylon* (yarn)

BELGIUM

BAYER ANTWERPEN N.V.
Nylon 6 — Antwerpen: *Dorix* (staple)

BEAULIEU-NYLON S.A. •
Nylon 6 — Kruishoutem, East Flanders (yarn & staple)

FABELTA NINOVE N.V.
Rayon — Ninove, East Flanders (reg yarn)

FABELTA ZWIJNAARDE S.A.
Nylon 66 — Zwijnaarde, East Flanders: *Fabelnyl* (yarn)

HOECHST CELANESE
Acetate — Lanaken, Limburg (yarn)
Triacetate — Lanaken (yarn)

BELGIUM (continued)

OLEFIN FIBER

DELOTEX (P staple)

N.V. FIBRILO Zele, East Flanders (P staple & film)

S.A. LA LOKEROISE Lokeren, East Flanders: *Alpha Carpet, Delta Carpet* (P yarn & staple)

OSTEND STORES & ROPEWORKS S.A. Ostend, West Flanders

POLYFIL N.V. (Subsidiary of Beaulieu) Wielsbeke (P yarn)

ROGER VANDEN BERGHE N.V. Desselgem (P yarn)

T.T.C. POLYOLEFINS S.A. Overpelt, Limburg (P monofil)

OLEFIN FILM FIBER, only

N.V. JONCKVANSTEEN, Passendale

S.A. PHORMIUM, Zele, East Flanders

POLYTEXCO S.P.R.L., Beveren, Kortryk

S.A. U.C.O., Ledeberg, Gent

GLASS FIBER

N.V. BAYER S.A., Antwerpen

OWENS-CORNING FIBERGLAS EUROPE S.A. Battice, Liége
Fiberglas

Artificial (cellulosic) production and capacity data are combined with the Netherlands on pages 108 - 111. Synthetic (noncellulosic) production and capacity data are combined with the Netherlands and Luxembourg under "Benelux" on pages 104 - 107.

BOLIVIA

HILANDERIA DE ACRÍLICOS Y FIBRAS SINTETICAS "HILBO"
Acrylic — La Paz

TEJEDURIAS PLANAS DE HILADOS DE FIBRAS ARTIFICIALES Y SINTÉTICAS "ESTATEX"
La Paz

TEJIDOS DE PUNTO "FENIX"
La Paz

TEXTURBOL TEXTURIZADORA BOLIVIANA
Polyester — La Paz (yarn)

BRAZIL

ARTEPESCA - S.A. ARTIGOS DE PESCA DO NORDESTE •
Nylon 6 — Igarassu, Pernambuco (monofil)

BRAZIL (continued)

BANYLSA TECELAGEM DO BRASIL S.A.
Nylon 6 — Aratu, Bahia (yarn)
Polyester — Aratu *Fio Banylsa Poliester* (yarn)

CELBRAS INDUSTRIAS QUIMICAS E TÊXTEIS S.A.
Acrylic — Camaçari, Bahia *Triana* (staple)
Polyester — Pocos de Caldas, Minas Gerais *Fortrel* (staple)

CIA. NITRO QÚIMICA BRASILEIRA
Rayon — São Miguel Paulista, São Paulo (reg yarn)

COBAFI - CIA. BAHIANA DE FIBRAS
Nylon 6 — Camaçari, Bahia (yarn)
Polyester — Camaçari (yarn)

DE MILLUS S.A. INDUSTRIA E COMÉRCIO
Nylon 6 — Rio de Janeiro *Demilon* (yarn)

DU PONT S.A. INDÚSTRIAS QÚIMICAS
Spandex — Paulinia, São Paulo *Lycra* (fused multifil)

EQUIPESCA - EQUIPAMENTOS DE PESCA S.A.
Nylon 6 — Campinas, São Paulo (monofil)

FIBRA S.A.
Nylon 6 — Americana & Osasco, São Paulo *Lilion* (yarn)
Polyester — São Paulo (yarn)
Rayon — Americana (reg yarn & staple)

HOECHST DO BRASIL QÚIMICA E FARMACEUTICA S.A.
Polyester — Osasco *Trevira* (yarn & monofil)

INDUSTRIAS MATARAZZO DE FIBRAS SINTÉTICAS S.A.
Nylon 6 — São José dos Campos, São Paulo (yarn)

MANAP - MANUFATURA NACIONAL DE PLÁSTICOS •
Nylon 6 — Osasco, São Paulo *Caicara* (monofil)

MARCATTO S.A. IND. E COM. •
Nylon 6 — Jaraguá do Sul, Santa Catarina (monofil)

MAZZAFERRO POLIMEROS E FIBRAS SINTÉTICAS LTDA.
Nylon 6 — São Bernardo do Campo, São Paulo *Grilon, Trilon* (yarn & monofil)
Polyester — São Bernardo do Campo, São Paulo (monofil)

MONOFIL - CIA. INDUSTRIAL DE MONOFILAMENTOS •
Nylon 6 — Sao Paulo, São Paulo (monofil)

NOVELSPUMA - ESPUMA DE NYLON S.A.
Nylon 6 — São Paulo, São Paulo (yarn)

POLYENKA S.A.
Polyester — Americana, São Paulo *Diolen* (yarn)

BRAZIL (continued)

POLYNOR S.A. INDUSTRIA E COMÉRCIO DE FIBRAS SINTETICAS DA PARÁIBA
Polyester — João Pessoa, Paraiba *Amilon, Polynor* (yarn & staple)

RHODIA S.A.
Acrylic — São José dos Campos, São Paulo *Crylor* (staple)
Nylon 66 — Santo André *Dropnyl, Rhodianyl* (yarn & staple)
São Bernardo do Campo, São Paulo *Celtral BCF* (yarn)
Polyester — Santo André *Dropgal Tergal, Tergal* (yarn & staple)
São José dos Campos *Bidim* (spunbonded)
São Bernardo do Campo *Fortrel* (yarn)

RHODIA NORDESTE S.A.
Polyester — Cabo, Pernambuco *Dropgal, Tergal* (staple)

SEARA IND. TÊXTIL LTDA. •
Nylon 6 — Londrina, Paraná (monofil)

SPUMAR S.A. INDUSTRIA E COMERCIO •
Nylon 6 — São Paulo (yarn)

OLEFIN FIBER

ARTEPESCA - S.A. ARTIGOS DE PESCA DO NORDESTE
Igarassu, Pernambuco (E & P monofil)

BRASIL VISCOSE S.A. Jundiapeba, São Paulo (P staple)

ETRÚRIA S.A. INDUSTRIA DE FIBRAS E FIOS SINTÉTICOS
Mairinque, São Paulo (P staple)

FADEMAC - FABRICA DE MATERIAIS DE CONSTR. S.A.
Jacarei, São Paulo (P staple)

FITESA - FIAÇAO TÊXTIL DE EMBALAGENS PLASTICAS S.A.
Guaiba, Rio Grande do Sul (P staple) & Porto Alegre, Rio Grande do Sul (P film)

INYLBRA S.A. TAPETES E VELUDOS Diadema, São Paulo (P staple)

MANAP - MANUFATURA NACIONAL DE PLASTICOS
Osasco, São Paulo (P monofil)

MARCATTO S.A. IND. E COM. Jaragua do Sul, Santa Catarina (E & P monofil)

MONOFIL - CIA. INDUSTRIAL DE MONOFILAMENTOS
São Paulo, São Paulo (P monofil)

SEARA IND. TÊXTIL LTDA. Londrina, Paraná (E & P monofil)

SPUMAR S.A. INDUSTRIA E COMERCIO São Paulo, *Fibrilene, Polylene, Polyplan, Prolene* (P yarn, staple & film)

BRAZIL (continued)

TAPETELENE - INDÚSTRIA S.A. Pajucara/Maramguape, Ceará (P staple)

TINTORIA S.A. - BENEFICIAMENTO DE FIO (P yarn)

OLEFIN FILM FIBER, only

BRASMEN TOL CACAPAVA S.A., Cacapava, São Paulo

CACIQUE DE EMBALAGENS S.A. INDUSTRIA E COMERCIO, Londrina, Paraná

C.A.T.A. - CIA. AMAZONIA TEXTIL DE ANIAGEM S.A., Belém, Pará

CIA. FAB. YOLANDA S.A., Récife, Pernambuco

CIA. JAUENSE INDUSTRIAL, Jau, São Paulo

CIA. UNIAO MANUFATORA DE TECIDOS, Rio de Janeiro

DICOPLAST S.A. INDÚSTRIA E COMERCIO DE PLASTICOS, Presidente Prudente, São Paulo

EMPLA - EMBALAGENS PLÁSTICAS S.A., Rio de Janeiro

FIBRASA IND. E COM. DE FIOS E EMBALAGENS S.A., Espírito Santo

FIBROTEX TECELAGEM DE FIBRAS S.A., São Paulo

IMPLASA - INDÚSTRIA DE PLÁSTICOS ZANIOLO S.A., São José dos Pinhais, Paraná

INDÚSTRIA TÉXTIL TSUZUKI LTDA., Suzano, São Paulo

IPLAC DO BRASIL S.A. PLÁSTICOS, Fortaleza, Ceará*

NOVOPLAST IND. E COM. DE PLÁSTICOS, Nova Odessa, São Paulo

PLABASA - PLÁSTICOS DA BAHIA S.A., Salvador, Bahia

PLASMINAS - PLASTICOS MINAS LTDA., Tres Pontas, Minas Gerais

PLASTICOS DO PARANÁ LTDA., Londrina, Paraná

PLÁSTICOS LINIL S.A., Récife, Pernambuco

PLÁSTICOS INDÚSTRIA DE EMBALAGENS LTDA., Campinas, São Paulo

QUALITAS IND. E COM. LTDA., São Paulo

SACOPLAST/PLANOSA - PLÁSTICOS DO NORDESTE S.A., Natal, Rio Grande do Norte

GLASS FIBER

OCFIBRAS Rio Claro, São Paulo *Fiberglas*

BULGARIA

KOMBINAT "DIMITAR DIMOV" •

Acrylic	Burgas *Buiana* (staple)
Nylon 6	Vidin *Vidlon* (yarn)
Polyester	Yambol *Yambolen* (yarn, staple & tow)

KOMBINAT "SVILOSA"

Rayon	Svishtov (reg yarn & staple)

OLEFIN FIBER

KOMABINAT "DIMITAR DIMOV" Yambol (P staple)

CANADA

BASF FIBRES INC.

Nylon 6	Arnprior, Ontario *Zefran* (yarn & staple)

CELANESE CANADA INC.

Acetate	Drummondville, Quebec (yarn)
Polyester	Millhaven, Ontario *Fortel* (yarn, staple, tow & fiberfill)

COURTAULDS (CANADA) LIMITED

Rayon	Cornwall, Ontario (staple)

DU PONT CANADA INC. •

Nylon 66	Kingston, Ontario *Antron, Cantrece, Du Pont* (yarn, staple & tow)
Spandex	Maitland *Lycra* (fused multifil)

FIRESTONE TEXTILES CO.-A DIVISION OF FIRESTONE CANADA LTD.-LTEE

Nylon 6	Woodstock, Ontario (yarn & monofil)

OLEFIN FIBER

AMOCO FABRICS & FIBERS CO. Brantford & Hawkesbury, Ontario, St. Jean, Quebec *Protel* (P yarn, staple, E & P monofil & P film)

CALKO MILLS LTD. Rivière du Loup, Quebec (P monofil)

CANADA WESTERN CORDAGE CO., LTD. New Westminster, B.C. (P monofil)

DOON TWINES LTD. Kitchener, Ontario (P yarn, monofil & staple)

DU PONT CANADA INC. North Bay, Ontario (P film)

GUELPH TWINES LTD. Guelph, Ontario (P monofil & film)

NOVASTRAND St. John, New Brunswick (P monofil)

POLI-TWINE CORP. LTD. Belleville, Ontario & Saskatoon, Saskatchewan *Polytie, PolyTwine, Spiralok* (P monofil)

SCHLEGEL COMPANY CANADA Oakville (P monofil)

CANADA (continued)

STRUDEX FIBRES LTD., DIVISION OF KRAUS CARPET MILLS LTD. Waterloo (P yarn & staple - captive)

OLEFIN FILM FIBER, only

FIBERWORLD, LTD. Hawkesbury, Ontario

POLYMER INTERNATIONAL (N.S.) LTD. Truro, N.S.

GLASS FIBER

FIBERGLAS CANADA LIMITED Guelph, Ontario *Fiberglas*

CHILE

GOODYEAR DE CHILE, S.A.I.C.
Nylon 6 — Maipú, Santiago (yarn & monofil)

INDUSTRIAS QUIMICAS GENERALES S.A.
Rayon — Quillota, Valparaiso (ind yarn & staple)

LANERA AUSTRAL S.A.
Polyester — Santiago (yarn, staple & tops)

MANUFACTURAS SUMAR S.A.
Nylon 6 — El Pinar 172, Santiago *Crilobal* (yarn)
Polyester — El Pinar 172 *Poligal* (yarn & staple)

QUIMICA INDUSTRIAL S.A.
Polyester — Maipú, Santiago *Polycron* (staple & tops)

CHINA, PEOPLE'S REPUBLIC OF

Although reliable information on locations of manufactured fiber plants in the People's Republic of China is not available, every effort has been made to make the following listing as complete as possible.

RAYON and/or ACETATE PLANTS reported at:
Amoy, Antung, Canton, Foshan, Kirin, Nanchang, Nanking, Paoting and Shanghai.

NYLON PLANTS reported at:
Beijing, Changsha*, Hsinhsiang, Paoting Province, Jiangsu*, Jinzhou, Liaoyang, Pingdings, Shanghai, Shanyi, Sian, Sichuan, Sining, Tianjin, Yeuyang, Hunan Province* and Zhenjiang.

POLYESTER PLANTS reported at:
Beijing, Changzhou, Jiangsu Province, Fangshen, Beijing Province, Guangdong Province, Guangzhou, Canton Province, Hangchow, Heilongjiang, Henan*, Jinshan, Shanghai Province, Liaoyang, Nantong, Nanjing, Jiangsu Province, Shanghai, Sichuan, Taiyuan, Tianjin, Tientsin, Xiamen, Funjion Province, Xinhu, Yizheng and Zhenjiang.

ACRYLIC PLANTS reported at:
Anquing, Anhui Province, Chenchiang, Harbin Province, Daquing, Fushun, Lanzhou, Luda, Maoming, Qinhuangdao, Shanghai and Zibo.

SYNTHETIC (NONCELLULOSIC) PLANTS reported at:
Beijing (vinal), Canton (vinyon), Chunking (vinyon), Foochow (vinyon), Lanzhou (olefin & vinal), Shanghai (vinyon), Shengli (vinyon) and Tientsin (vinyon).

The following three plants have been reported as producing glass fiber: Shanghai Glass Fiber Plant, Shanghai Tungfanghung Glass Fiber Plant and Tientsin Glass Fiber Plant.

COLOMBIA

COLTEFIBRAS S.A.
Polyester — Igatui, Antioquia* (yarn & staple)

ENKA DE COLOMBIA S.A.
Nylon 6 — Girardota, Antioquia *Enkalon* (yarn)
Polyester — Girardota *Terlenka* (yarn & staple)

FABRICA DE HILAZAS VANYLON S.A.
Nylon 6 — Barranquilla, Atlántico *Vanylon* (yarn & monofil)

POLIMEROS COLOMBIANOS S.A.
Polyester — Medellin, Antioquia *Primel* (yarn, staple, tow & tops)

ZYLETTE (LAFAYETTE)
Polyester — Bogotá (yarn)

OLEFIN FILM FIBER, only

COMPANIA NACIONAL DE EMPAQUES S.A. Medellin

PETROQUIMICA Colombiana, Cartagena*

PLASTICOS DE MAGDELENA LTDA. Santa Marta

POLYMER DE COLOMBIA S.A. Cartagena

COSTA RICA

OLYMPIC FIBERS, S.A.
Polyester — San Antonio de Belén (yarn)

CUBA

INDUSTRIAS CONSOLIDADAS DE MATANZAS, S.A.
Rayon — Matanzas (ind & reg yarn & staple)

CYPRUS

OLEFIN FIBER

LORDOS POLYSAC (LIMASSOL) LIMITED Limassol (P film)

CZECHOSLOVAKIA

CHEMICKÉ ZÁVODY JURAJA DIMITROVA, N.P.*
(GEORGE DIMITROV CHEMICAL WORKS, NATIONAL CORP.)
Rayon — Bratislava, Slovakia (reg yarn)

CHEMLON, N.P. (CHEMLON, NATIONAL CORPORATION)
Nylon 6 — Humenné, Slovakia *Chemlon* (yarn)

CHEMOPETROL
Rayon — Neratovice (yarn)

CZECHOSLOVAKIA (continued)

CHEMOSVIT, N.P. (CHEMOSVIT, NATIONAL CORPORATION) •

Nylon 6	Svit, Slovakia: *Svitontex* (yarn & staple)
Rayon	Svit (reg yarn)

SEVEROCESKE CHEMICKE ZÁVODY, N.P. (NORTH BOHEMIAN CHEMICAL WORKS, NATIONAL CORP.)

Rayon	Lovosice, Bohemia (ind yarn)

SILON, N.P. (SILON, NATIONAL CORPORATION)

Nylon 6	Planá nad Luznici, Bohemia: *Silon* (yarn & monofil)
Polyester	Planá nad Luznici: *Tesil, Tevyro, Velana* (staple, tow & fiberfill)

SLOVENSKY HODVÁB, N.P. (SLOVAKIAN FILAMENT YARN, NATIONAL CORPORATION)

Polyester	Senica nad Myjavou, Slovakia: *Slotera* (yarn)
Rayon	Senica nad Myjavou (reg yarn)

SPOLANA, N.P. (SPOLANA, NATIONAL CORPORATION)

Rayon	Neratovice, Bohemia (staple)

OLEFIN FIBER

CHEMICKE ZAVODY JURAJA DIMITROVA, N.P. Bratislava: *Istrona, Labren, Nobelex* (P yarn & staple)

CHEMOSVIT, N.P. Svit: *Prolen, Texizol* (P yarn & spunbonded)

JUTA, N.P. Úpice, Bohemia (P spunbonded)

OLEFIN FILM FIBER, only

JUTA, N.P. Adamov, Moravia and Bernartice u Trutnova; Dvur Králové, Jilemnice & Úpice, Bohemia

POVAZSKE CHEMICKÉ ZÁVODY, N.P. Zilina, Slovakia

TECHNOLEN, N.P. Lomnice nad Popelkou, Bohemia

GLASS FIBER

SKLOPLAST, N.P. (SKLOPLAST, NATIONAL CORPORATION) Trnava, Slovakia (yarn, chopped strand & mat)

VERTEX, N.P. (VERTEX, NATIONAL CORPORATION) Litomysl, Bohemia (yarn, roving, mat & staple yarn)

DENMARK

OLEFIN FIBER

A/S FIBERTEX Aalborg (P staple)

DANAKLON A/S Varde (E & P staple & film); *Krenit* (P reinforcing fiber); *Soft 71* (P fiber non-woven)

DENMARK (continued)

ESBJERG THERMOPLAST, (A division of Vita Polymer Denmark A/S) Esbjerg (E & P monofil)

OLEFIN FILM FIBER, only

R.F.W. PLAST-INDUSTRI A/S Vejle (P film)

ROBLON A/S Frederikshavn (P film)

ECUADOR

ECUATORIANA DE TEJIDOS DE PUNTA

Polyester	Punta (yarn)

ENKADOR S.A.

Polyester	Sangolqui, Pichincha (yarn)

FIBRATEX S.A.

Polyester	Guayaquil, Guayas (yarn)

EGYPT

ESTABLISSEMENTS INDUSTRIELS POUR LA SOIE ET LE COTON S.A.A. (E.S.C.O.)

Rayon	Cairo (reg yarn)

MISR AL-AMIRIYA INDUSTRIAL FIBRE CO.

Polyester	Amiriya (yarn* & staple)

SOCIETE MISR POUR LA RAYONNE S.A.A. (MISR RAYON CO.)

Nylon 6	Kafr-el-Dawar: *Misrnylon* (yarn), *Misrnylon* (staple)
Polyester	Kafr-el-Dawar: *Polymisr* (yarn)
Rayon	Kafr-el-Dawar (reg yarn & staple)

EL SALVADOR

OLEFIN FIBER

FILAMENTOS Y PERFILES, S.A. (FILPERSA) San Salvador: *Duraplen* (E & P monofil)

SALVAPLASTIC, S.A. San Salvador (P monofil

FINLAND

FINEFIBRE OY

Nylon 66	Tornio (yarn)

KEMIRA OY SATERI

Rayon	Valkeakoski (staple)

FINLAND (continued)

OLEFIN FILM FIBER, only

MANILLA OY Turku

PIIPPO OY Lempaala

GLASS FIBER

A. AHLSTROM OY GLASSFIBRE Karhula *Kuitulasi* (roving & mat)

FRANCE

CELLATEX (a subsidiary of Rhône-Poulenc-Textile)
Rayon — Givet, Ardennes; Isère (reg yarn)

COURTAULDS S.A.
Acrylic — Pont du Leu, Coquelles, Pas-de-Calais *Courtelle* (staple)

NYSAM S.A.
Nylon 6 — St. Quentin, Aisne *Lilion* (yarn)

RHONE-POULENC-FIBRES (a subsidiary of Rhône-Poulenc Textile)
Nylon 66 — Albi, Tarn; St. Laurent-Blangy, Pas-de-Calais; St. Quentin, Aisne & Valance, Drôme *Nylfrance* (yarn & staple)
Polyester — Gauchy, Aisne & Valence *Bidim* (spunbonded) *Tergal* (yarn & staple)

RHOVYL (a subsidiary of Rhône-Poulenc-Textile)
Vinyon — Tronville-en-Barrois, Meuse *Clevyl, Rhovyl, Thermovyl* (yarn & staple)

SOCIETE CHOMARAT
Nylon 6 — Mariac (yarn - captive)

OLEFIN FIBER

PLASTIQUE DE ROUBAIX Roubaix (P film & staple)

SODOCA FABRICATION DE NONTISSES SYNTHETIQUES S.A.R.L. Neuf Brisach, Haut-Rhin (P spunbonded)

OLEFIN FILM FIBER, only

ETS. AMMANN & CIE. Saint-Louis

ETS. BATAILLE Rosendael

BIHR FRERES S.A. Xertigny

BOUSSAC SAINT FRERES S.A. Flixecourt

SEINE & LYS Paris

FRANCE (continued)

GLASS FIBER

OWENS-CORNING FIBERGLAS FRANCE S.A. L'Ardoise, Gard *Fiberglas*

VETROTEX SAINT-GOBAIN Chambéry, Savoie-Fils et Fibres de Renforcement *Vetrotex*

GERMAN DEMOCRATIC REPUBLIC
DEUTSCHE DEMOKRATISCHE REPUBLIK (EASTERN)

(Those facilities indicated by # are part of the trust VEB Chemiefaserkombinat Schwarza "Wilhelm Pieck".)

CHEMIEFASERWERK "FRIEDRICH ENGELS" #
Acrylic — Premnitz, Krs. Rathenow *Wolpryla* (staple)
Nylon 6 — Premnitz *Dederon* (staple)
Polyester — Premnitz *Grisuten* (staple)
Rayon — Premnitz (reg yarn)

CHEMIEFASERWERK "WILHELM-PIECK-STADT" GUBEN #
Nylon 6 — Guben *Dederon* (yarn & monofil)
Polyester — Guben *Grisuten* (yarn)

KUNSTSEIDENWERK "CLARA ZETKIN, ELSTERBERG" #
Rayon — Elsterberg, Krs. Greiz (reg yarn)

SACHSISCHES KUNSTSEIDENWERK "SIEGFRIED RADEL" #
Polyester — Pirna* (yarn)
Rayon — Pirna (ind. reg & cupra yarn)

SACHSISCHE ZELLWOLLE #
Rayon — Plauen (staple)

SPINNSTOFFWERK "OTTO BUCHWITZ" #
Rayon — Glauchau (staple)

VEB CHEMIEFASERKOMBINAT SCHWARZA "WILHELM PIECK"
Nylon 6 — Schwarza, Krs. Rudolstadt *Dederon* (yarn)
Rayon — Schwarza (staple)

VEB FILMFABRIK FOTOCHEMISCHES KOMBINAT
Acrylic — Wolfen, Krs. Bitterfeld *Wolpryla* (staple)
Rayon — Wolfen (ind yarn & staple)
Vinyon — Wolfen *Pivacid* (staple)

ZELLSTOFF-UND ZELLWOLLWERKE WITTENBERGE #
Rayon — Wittenberge (staple)

GLASS FIBER

VEB GLASSEIDENWERK *Oschatz Glasseidengewebe, Glasseiden-Roving, Glasseiden-Stapelbindermatten, Glasseiden-Twist, Glasseiden-Zwirn, Roving-Gewebe*

GERMANY, FEDERAL REPUBLIC OF
BUNDESREPUBLIK DEUTSCHLAND (WESTERN)

AKZO FIBERS AND POLYMERS DIVISION, ENKA A.G.

Nylon 6/66	Obernburg *Enka Nylon* (yarn), *Enka Perlon* (yarn)
Polyester	Oberbruch & Obernburg *Diolen* (yarn)
Rayon	Kelsterbach, Oberbruch & Obernburg (ind & reg yarn)

BAYER A.G.

Acrylic	Dormagen *Bayer-Textilfaser Dralon* (yarn & staple)
Nylon 6	Dormagen *Perlon-Draht* (monofil)
Spandex	Dormagen *Bayer-Textilfaser Dorlastan* (fused multifil)

BOLTA WERKE G.m.b.H.

Saran	Nürnberg *Bolta* (monofil)

DEUTSCHE ICI G.m.b.H.

Nylon 66	Östringen *Timbrelle* (yarn & staple)
Polyester	Östringen *Terylene* (yarn)

DU PONT DE NEMOURS (DEUTSCHLAND) G.m.b.H.

Nylon 66	Uentrop, Kreis Unna (yarn & staple)
Polyester	Uentrop *Dacron* (staple, tow & fiberfill)

E. HAHL KG •

Nylon 6	Munderkingen (staple)

FASERWERKE LINGEN G.m.b.H.

Acrylic	Lingen *Bayer-Texilfasern Dralon* (staple)

HOECHST A.G.

Acrylic	Kelheim/Donau *Dolan* (staple)
Polyester	Bad Hersfeld, Hessen & Bobingen/Augsburg land *Trevira* (yarn, staple & spunbonded), *Trevira-Draht* (monofil)
Rayon	Kelheim/Donau (staple)

KUNERT

Nylon 66	Deggendorf (yarn)
Polyester	Deggendorf (yarn)

LUTRAVIL SPINNVLIES •

Nylon 6	Kaiserslautern *Lutrabond* (spunbonded)
Polyester	Kaiserslautern *Lutradur* (spunbonded)

NORDDEUTSCHE FASERWERKE G.m.b.H.

Nylon 6/66	Neumünster *SIKS NYLON* (yarn), *SIKS PERLON* (yarn & staple)
Polyester	Neumünster *Avitron* (yarn)

PHOENIX GUMMIWERK A.G.

Saran	Hamburg/Harburg *Harlan* (monofil)

HEINRICH REINHOLD KG •

Nylon 6	Selbitz, Bayern (staple)

GERMANY, FEDERAL REPUBLIC OF (continued)
BUNDESREPUBLIK DEUTSCHLAND (WESTERN)

RHODIA A.G.

Acetate	Freiburg/Br. *RHODIA FILTER TOW* (tow)
Nylon 6.6	Freiburg/Br. & Rottweil a. N/Württ. *RHODIA MERYL, RHODIA NYLON 6.6, RHODIA SPORT* (yarn & staple)
Polyester	Freiburg/Br. *RHODIA COMFORTO, RHODIA PONTELLA, RHODIA SETILA, RHODIA TERGAL* (yarn)

SPINNSTOFFABRIK ZEHLENDORF A.G.

Polyester	Berlin-Zehlendorf *Trevira* (yarn & staple)

WACKER-CHEMIE G.m.b.H.

Vinal	München-Burghausen *Wacker MP-Faser* (staple)

OLEFIN FIBER

J. F. ADOLFF A.G. Backnang (P film)

AMOCO FABRICS & FIBERS CO., DIVISION OF AMOCO (DEUTSCHLAND) G.m.b.H. Gronau (P film & staple)

J. H. BENECKE G.m.b.H. Peine *Corovin* (P spunbonded)

R. B. J. RUDOLF BILLERMANN KG Emsdetten (P yarn & staple)

CHEMISCHE WERKE HÜLS A.G. Marl, Kreis Recklinghausen, Westphalia *Vestolan* (E & P monofil)

DYNAMIT NOBEL A.G. Troisdorf, Bez. Köln *Trofil* (E & P monofil & tow)

DEUFIL Bergkamen (P yarn)

FASERWERKE BOTTROP G.m.b.H. Bottrop (P staple)

FÜSSENER TEXTIL A.G. Füssen (P film)

GEO. GLEISTEIN & SOHN Bremen-Vegesack (P film & monofil)

E. HAHL KG Munderkingen (P monofil)

RUDOLF HILLER KG (P monofil)

LUTRAVIL SPINNVLIES Kaiserslautern *Lutrasil* (P spunbonded)

HEINRICH REINHOLD KG Selbitz/Bayern (P staple)

STEEN Hamburg (P staple)

WESTFALIA SPINNEREI U. KUNSTOFFWERK SCHEM KG Minden (P monofil & film)

OLEFIN FILM FIBER, only

BAUMHÜTER G.m.b.H. Wiedenbrück

GERMANY, FEDERAL REPUBLIC OF (continued)

BUNDESREPUBLIK DEUTSCHLAND (WESTERN)

BREMER WOLL-KAMMEREI Bremen-Blumenthal

ERNST JAEGER Dusseldorf-Reisholz

HEINZ G. JUNEMANN (NORDHESSISCHE HAARWARENFABRIK) Felsberg

KUSGA KUNSTOFFGARNE G.m.b.H. Mainz

POLYDRESS PLASTIC G.m.b.H. Michelstadt

POLYUNION KUNSTOFFWERK Mesum

SCHILGEN Emsdetten

SPOHN G.m.b.H Freiburg

B. T. F. TECKLENBORG & CO. Bremen-Grohn

DR. KARL WETEKAM & CO. Melsungen

GLASS FIBER

GEVETEX-TEXTILGLAS G.m.b.H. Aachen & Herzogenrath
Fiberglas Vetrotex

SCHULLER GLASWERK Westheim

GREECE

ETMA S.A.
Nylon 6/66 Athens (yarn)
Rayon Athens (reg yarn)

HELLENIC SYNTHETICS INDUSTRY
Polyester Kalogreza (yarn)

POLYETMA LTD.
Polyester Athens (yarn)

"VOMVIX" S.A.
Nylon 6/66 Athens (yarn)
Polyester Athens (yarn)

OLEFIN FIBER

VIOFARM Argos (P staple)

OLEFIN FILM FIBER, only

ARIPLAST S.A. Athens

BIOSISAL Athens

DESSILA Piraeus

GREECE (continued)

ELVISAK Athens

MARINE ROPE Athens

OLYMPIC ROPES Piraeus

SISAL ROPERY Salonika

C. VELLIS HEIRS S.A. Piraeus

VESY S.A. SYNTHETIC MATERIALS INDUSTRY Piraeus

GUATEMALA

HILOS SINTETICOS CENTROAMERICANOS, S.A.
Nylon 6 San José Pinula, Guatemala (yarn) (idle)

OLEFIN FIBER

CORDELERIA LA RAPIDA Guatemala, Guatemala (P monofil)

HONDURAS

OLEFIN FIBER

POLYMER (subsidiary of United Brands) San Pedro Sula (P film)

HUNGARY

DANUFIL
Rayon Nyergesújfalu (staple*)

MAGYAR VISCOSAGYÁR (Hungarian Viscose Factory) •
Acrylic Nyergesújfalu *Crumeron* (staple)
Nylon 6 Nyergesújfalu *Danamid* (yarn & staple)
Rayon Nyergesújfalu *Crumeron* (staple)

OLEFIN FIBER

GRABOPLAST Gyor (P staple)

KENDER JUTA TEXTILIPARI V. Budapest (P film)

KENDERFONÓ ÉS SZÖVÖIPARI V. SZEGED Szeged (P film)

MAGYAR VISCOSAGYÁR Nyergesújfalu *Popril* (P staple)

SOPRONI SZÖNYEGGYÁR Sopron *Sopilen* (P yarn)

TISZA CHEMICAL COMBINE Lenin Varas (P staple)

INDIA

ACME INVESTMENTS LTD.
Nylon 6 Panki Industrial Area, Kanpur* (yarn)

INDIA (continued)

THE AHMEDABAD MFG. & CALICO PRINTING CO. LTD.
CALICO POLYESTER FIBRE DIV.

Polyester	Baroda, Gujarat *Ilacron* (staple)

ANDHRA PRADESH RAYONS LTD.

Rayon	Kamalapuram, Warangal District, Andhra Pradresh* (staple)

THE BARODA RAYON CORPORATION LIMITED

Nylon 6	Udhna, Gujarat *Snialon* (yarn)
Polyester	Udhna *Sniater* (yarn)
Rayon	Udhna (reg yarn)

BONGAIGAON REFINERY AND PETROCHEMICALS LTD.

Polyester	Goalpara, Assam* (staple)

CENTURY ENKA LIMITED

Nylon 6	Bhosari, Pune, Maharashtra* *Enkalon* (yarn)
Polyester	Bhosari (yarn)

CENTURY RAYON (Prop.: The Century Spg. & Mfg. Co. Ltd.)

Rayon	Kalyan, near Bombay, Maharashtra (ind & reg yarn)

GARWARE NYLONS LIMITED

Nylon 6	Pimpri, Pune, Maharashtra* *Garware* (yarn & monofil)
Polyester	Pimpri (yarn)

THE GWALIOR RAYON SILK MFG. (WVG) CO. LIMITED

Rayon	Birlagram, Nagda, Madhya Pradesh & Birlakootoam, Mavoor, Kerala (staple)
Polyester	Rajgarh*, Madhya Pradesh (staple)

HARYANA PETROCHEMICALS LTD.

Polyester	Rewari, Haryana* (yarn)

INDIA POLYFIBRES

Polyester	Parakandauli & Lucknow, Uttar Pradesh (staple)

INDIAN EXPLOSIVES LTD.

Polyester	Thane, near Bombay, Maharashtra *Terene* (staple)

INDIAN ORGANIC CHEMICALS LIMITED

Polyester	Manali, Madras, Tamil Nadu *Futura* (yarn & staple)

INDIAN PETROCHEMICALS CORP. LTD.

Acrylic	Vadodara, Baroda, Gujarat *Cashmilon* (staple)

THE INDIAN RAYON CORPORATION LIMITED

Rayon	Veraval, Gujarat (reg yarn)
Polyester	Broach (yarn*)

J.K. RAYON, J.K. PURI

Rayon	Kanpur, Uttar Pradesh (reg yarn)

J.K. SYNTHETICS LIMITED

Acrylic	Kota, Rajasthan *Jayacrylic* (staple)
Nylon 6	Kota *Jayanka, Jaycord, Jaykalon* (yarn, monofil & staple)
Polyester	Calcutta, Kota, Orissa* *Jakaylene* (yarn & staple)

INDIA (continued)

JAGATJIT COTTON TEXTILE MILLS LTD.

Nylon 6	Hoshiarpur, Punjab (yarn)
Polyester	Hoshiarpur (yarn)

KARNATAKA STATE INDUSTRIAL DEVELOPMENT CORPORATION LIMITED

Nylon 6	Karnataka* (yarn)
Polyester	Karnataka* (yarn & staple)

KESORAM RAYON (Prop.: Kesoram Industries and Cotton Mills Ltd.)

Rayon	Nayasarai, Hooghly, West Bengal (reg yarn)

MODIPON LIMITED

Nylon 6	Modinagar, Uttar Pradesh *Modipon* (yarn)
Polyester	Modinagar (yarn)
Rayon	(staple*)

THE NATIONAL RAYON CORPORATION LIMITED

Nylon 6	Mohone-Kalyan, near Bombay, Maharashtra* *N.R.C.* (yarn)
Rayon	Mohone-Kalyan (ind & reg yarn)

NIRLON SYNTHETIC FIBRES & CHEMICALS LIMITED

Nylon 6	Bombay, Maharashtra *Nircord, Nirlon* (yarn & monofil)
Polyester	Bombay *Nirester* (yarn)

ORISSA SYNTHETICS LTD.

Polyester	Orissa* (staple)

ORKAY SILK MILLS PVT. LTD.

Polyester	Patalganga, Maharashtra* (yarn)

PARSURAM PURIA SYNTHETICS LTD.

Polyester	Alwar, Rajasthan* (yarn)

PASUPATI ACRYLON LIMITED

Acrylic	Moradabad, Uttar Pradesh* (staple)

PETROFILS COOPERATIVE LIMITED

Polyester	Jawaharnagar, Baroda, Gujarat (yarn)

PRADESHIYA INDUSTRIAL INVESTMENT CORPORATION OF UTTAR PRADESH

Polyester	Uttar Pradesh* (yarn)

PUNJAB STATE INDUSTRIAL DEVELOPMENT CORP. LTD.

Acrylic	Punjab (staple)
Polyester	Punjab (staple)

RAYMOND SYNTHETICS

Polyester	(yarn*)

RELIANCE INDUSTRIES LTD.

Polyester	Patalganga, Maharashtra* (yarn & staple*)

SHREE SYNTHETICS LIMITED

Nylon 6	Naulakhi, Ujjain, Madhya Pradesh *Shreelon* (yarn)
Polyester	Naulakhi *Shreester* (yarn)

INDIA (continued)

SHRIRAM FIBRES LIMITED
Nylon 6 — Manali, Madras, Tamil Nadu, *Tufcord* (yarn)

SHRIRAM RAYONS
Rayon — Kota, Rajasthan (ind yarn)
Nylon 6 — Kota (yarn)

THE SIRSILK LIMITED
Acetate — Sirpur Kaghaznagar, Andhra Pradesh (yarn & staple)

SOUTH INDIA VISCOSE LIMITED
Rayon — Sirumughai, near Mettupalayam, Tamil Nadu (reg yarn & staple)

STRETCH FIBRES (INDIA) LIMITED
Nylon 6 — Nagpur, Maharashtra, *SF* (yarn)

SWADESHI POLYTEX LIMITED
Polyester — Gaziabad, Uttar Pradesh, *Jailene* (staple)

THAPAR DU PONT LTD.
Nylon — Goa* (ind yarn)

THE TRAVANCORE RAYONS LIMITED
Rayon — Rayonpuram, Kerala (reg yarn)

TUNGABHADRA FIBRES LTD.
Rayon — Tungabhadra, Andhra Pradesh (staple)

OLEFIN FIBER

AMITABH TEXTILE MILLS LTD. Dehra Dun, Uttar Pradesh* (P yarn)

ANIL KUMAR JAIN Ankleshwar, Gujarat* (P yarn)

GUJARAT FILAMENTS CORPORATION LTD. Baroda, Gujarat* (P yarn)

GUPTA NEEDLE INDUSTRIES PVT. LTD. Dharuhera, Haryana* (P yarn)

INDO SYNTHETICS CORP. (P yarn*)

J.K. BHAGAT Bhiwand, Alwar, Rajasthan* (P yarn)

KALYANI ASBESTOS CEMENT PVT. LTD. Kalol, Gujarat* (P yarn)

NEOMER LIMITED Baroda, Panchmahal, Gujarat *Proplon* (P staple)

NIAGARA INTERNATIONAL (P yarn*)

POLYPROP INDUSTRIES Dharuhera, Haryana* (P yarn)

POLYPROPYLENE INDIA, LTD. Uttar Pradesh* (P yarn)

RAJASTHAN PETROSYNTHETICS LTD. Udaipur, Rajasthan* (P yarn)

RAJENDRA V. PATEL Cambay, Gujarat* (P yarn)

INDIA (continued)

SANJEEV SHRIYA Uttar Pradesh* (P yarn)

INDONESIA

INDONESIA PENELITIAN SELULOSA (Cellulose Research Institute)

P.F. FIBRES e CHEMICALS
Nylon — (yarn)

P.T. BERKAT INDAH AGUNG
Rayon — Tangerang, West Java* (staple)

P.T. INDO-BHARAT RAYON
Rayon — Desa Cilangkap, Purwakarta (staple)

P.T. INDO RAMA SYNTHETICS
Rayon — Jatiluhur, Purwakarta (staple)
Acrylic — Jatiluhur, Purwakarta (staple)
Polyester — Jatiluhur, Purwakarta (staple*)

P.T. INDONESIA ASAHI CHEMICAL
Nylon 6 — Jatiluhur, Purwakarta, West Java (yarn)

P.T. INDONESIA TORAY SYNTHETICS
Nylon 6 — Tangerang, West Java (yarn)
Polyester — Tangerang (staple)

P.T. INDUSTRI SANDANG I
Polyester — Tangerang* (staple)

P.T. INDUSTRI SANDANG II
Rayon — South Sumatra* & West Kalimantan* (staple)

P.T. INTI
Rayon — West Kalimanton (staple*)

P.T. INTI INDAH RAYON UTAMA
Rayon — Sosorladang, N. Sumatra* (yarn)

P.T. KUMA FIBER (P.T. Kuraray Manunggal Fibre Industries)
Polyester — Cikokol, Tangerang, West Java (staple)

P.T. PAN ASIA SYNTHETIC ABADI
Polyester — Bandung (yarn)

P.T. POLYSINDO EKA PERKASA
Polyester — Kaliwungu, Kendal, C. Java (yarn & staple)

P.T. SHINTA-INDAH DJAYA
Nylon 6 — Tangerang, West Java (yarn)
Polyester — Tangerang *Shinta* (yarn)

P.T. SOUTH PACIFIC VISCOSE
Rayon — Purwakarta, West Java (staple)

P.T. SUSILIA INDAH SYNTHETIC FIBRES INDUSTRIES
Polyester — Djakarta*, Tangerang, West Java (yarn & staple)

P.T. TEXMACO TAMAN SYNTHETIC

INDONESIA (continued)

P.T. TIFICOR (P.T. Teijin Indonesia Fibre Corp.)
Polyester — Tangerang, West Java (yarn & staple*)

P.T. TOLARAM
Polyester — (yarn)

P.T. TRI REMPOA SOLO SYNTHETIC
Polyester — Rempon, Tangerang, West Java (staple)

P.T. VASTEX PRIMA INDUSTRIES
Polyester — Jalan Gedebage Ujungberung Bandung (yarn)

P.T. YASINTA
Polyester — Tangerang, West Java (yarn & staple*)

RAUMAQ ENTERPRISES
Nylon — (yarn)

IRAN

PARSYLON CORPORATION
Nylon 6 — Khoram Abad (yarn)

POLYACRYL IRAN CORPORATION
Acrylic — Isfahan (staple)
Polyester — Isfahan (yarn & staple)

SHERKAT SAHAMI ALIAF
Nylon 6 — Tehran *Aliaf* (yarn)

OLEFIN FIBER

JAHANCITT SPINNING & WEAVING CO. Tehran (P film)

IRAQ

HINDIYA RAYON FACTORY
Rayon — Hindiya (reg yarn & staple)

OLEFIN FIBER

STATE ENTERPRISE FOR PLASTIC BAGS Tikrit

IRELAND

ASAHI SYNTHETIC FIBRES (IRELAND) LTD.
Acrylic — Ballina, Mayon *Cashmilon* (staple)

LIRELLE (IRELAND) LTD. (A Division of Unifi, Inc.)
Polyester — Letterkenny *Lirelle* (yarn)

WELLMAN INTERNATIONAL LTD.
Nylon 6/66 — Mullagh, Kells, Meath *Welion* (staple)
Polyester — Mullagh *Filweli, Wellene* (staple)

OLEFIN FIBER

F. DRAKE (IRELAND) LTD. Moate, Westmeath (P staple)

J. & L.F. GOODBODY (SYNTHETICS) LTD. Clara, Offaly (P yarn & film)

IRELAND (continued)

OLEFIN FILM FIBER, only

IRISH POLYSACKS LTD. Blarney, Cork

IRISH ROPES LTD. Newbridge, Kildare

POLYTEX LTD.

ISRAEL

NILIT
Nylon 66 — Migdal Ha-Emek (yarn)

ITALY

ALBATESSILE S.p.A.
Polyester — Alba, Piemonte (yarn)

AQUAFIL S.p.A.
Nylon 6 — Arco di Trento, Trentino *Aqualon* (yarn)
Polyester — Arco di Trento (yarn)

BEMBERG S.p.A.
Nylon 6 — Gozzano, Piemonte *Ortalion* (yarn)
Cupro — Gozzano *Bemberg* (yarn)

CARPOL S.p.A.
Nylon 6 — Forli, Emilia Romagna (yarn)

ENICHEM FIBRE S.p.A. (formerly Anicfibre)
Acrylic — Ottana & Porto Torres, Sardegna *Euroacril, Sironil* (staple & tow)
Nylon 6 — Pisticci, Lucania *Nivion* (yarn & staple)
Polyester — Ottana *Fidion* (staple & tow)

FILANDA 1992 S.p.A.
Polyester — Treviglio, Lombardia (yarn)

FILATURA DI VAL LESINA S.p.A.
Polyester — Andalo Valtellino, Lombardia *Valena* (yarn)

FIMALON S.p.A.
Nylon 66 — Castelnuovo Valsugana, Trentino Alto Adige (yarn)

FORTEX SIDAC S.p.A.
Nylon 6 — Forli, Emilia Romagna *Forlion* (yarn)

FRATELLI FRANCHI S.p.A.
Nylon 6 — Canapale, Toscana *Frankilon* (yarn)
Polyester — Canapale *Frankilene* (yarn)

INDUSTRIE TESSILI VERCELLI S.p.A.
Acetate — Vercelli, Piemonte (yarn)

MONTEFIBRE S.p.A.
Acrylic — Porto Marghera, Veneto *Leacril* (staple & tow)
Polyester — Acerra, Campania *Terital* (yarn, staple & tow)

NOVACETA S.p.A.
Acetate — Magenta, Lombardia (yarn)

ITALY (continued)

NUOVA RAYON ITALIA S.p.A.
Rayon — Rieti, Lazio (reg yarn)

RADICI FIL S.p.A.
Nylon 6 — Casnigo, Lombardia (yarn)

SETTE STELLE S.p.A.
Nylon 6 — Castelgoffredo, Lombardia (yarn)

SNIA FIBRE S.p.A.
Acrylic — Cesano Maderno, Lombardia; Villacidro, Sardegna *Velicren, Velicren F.R.* (staple & tow)
Nylon 6/66 — Castellaccio, Lazio; Cesano Maderno & Varedo, Lombardia; Villacidro, Napoli Campania *Coro Lilion Souple, Lilion Styl* (yarn, staple & tow)
Polyester — Napoli *Wistel, Wistel F.R.* (yarn)
Poliossiamide — Cesano Maderno *Vivrelle* (staple)

SOCIETA INDUSTRIALE CREMONESE S.p.A.
Rayon — Pizzighettone, Lombardia (ind yarn)

STERE
Polyester — Cardano al Campo, Lombardia (yarn)

TERBOND S.p.A.
Polyester — Pisticci, Lucania *Terbond* (spunbonded)

TEXTILE PRODUKTE S.p.A.
Nylon 6 — Villa D'Ogna, Lombardia (yarn & staple)

TORCITURA DI BORGOMANERO S.p.A.
Nylon 6 — Milano, Lombardia *Borgolon* (yarn)

OLEFIN FIBER

EUROFIL Gandino, Lombardia (P staple)

FILATURA DI DELEBIO S.p.A. Delebio, Lombardia *Delebion* (P yarn)

FILLI FRANA Casnigo, Lombardia (P staple & film)

I.T.S. Legnano, Lombardia (P yarn)

MOPLEFAN (Formerly Himont Italia S.p.A.)
Terni, Umbria *Meraklon* (P yarn & staple)

M.R. 81 Grassobbio, Lombardia (P yarn)

NOVASAR Caronno Pertusella, Lombardia (P yarn & staple)

POLYMECON Zibido S. Giacomo, Lombardia (P staple & tow)

SERGEL Casnigo, Lombardia (P staple)

TEXTILE PRODUKTE Villa D'Ogna, Lombardia (P staple)

OLEFIN FILM FIBER, only

CARPET BACKING S.p.A. Ceniga

ITALY (continued)

DE MAGISTRIS EMILIO Bagnolo Cremasco

LICANA NORD S.p.A. Cassano d'Adda (Milano)

MILANPLAST s.r.l. Milano

MOPLEFAN S.p.A. Milano

NEOFIBRE s.r.l. Lendinara

SACHIM (MUMMOLO) Bari

S.E.A.L. S.p.A. Milano

S.I.S.A.L. S.p.A. Piacenza

STIROSIR S.p.A. Milano

TESSITURA LOMBARDA DI CONSONNI ELIA ALBIATE

GLASS FIBER

VETROTEX ITALIA S.p.A. Besana Brianza, Lombardia (mat), Fibras Di Rinforzo *VETROTEX*

VITROFIL S.p.A. Vado Ligure, Liguria

JAPAN

ASAHI CHEMICAL INDUSTRY CO., LTD.
Acrylic — Fuji *Cashmilon, Pewlon* (yarn & staple)
Nylon 6/66 — Nobeoka & Moriyama *Asahi Kasei Nylon, Leona* (yarn, monofil & spunbonded)
Polyester — Nobeoka & Moriyama *Asahi Kasei Ester* (yarn & spunbonded)
Rayon — Nobeoka (reg & cupra yarn, cupra staple & cupra spunbonded)
Saran — Suzuka (yarn, monofil & staple)
Spandex — Moriyama *Roica*

DAIWABO RAYON CO., LTD.
Rayon — Maruda (staple)

FUJI SPINNING CO., LTD.
Rayon — Toyo (staple)
Spandex — Kozakai *Fujibo Spandex*

JAPAN EXLAN CO., LTD.
Acrylic — Saidaiji *Exlan* (staple)

KANEBO, LTD.
Acrylic — Hofu *Kanebo Acryl* (staple)
Nylon 6 — Hofu *Kanebo Nylon* (uarn)
Polyester — Sabae *Kanebo Polyester* (yarn)
Spandex — Hofu *Kanebo Loobell*

KANEGAFUCHI CHEMICAL INDUSTRY CO., LTD.
Modacrylic — Takasago *Kanecaron, Kanekalon* (staple & tow)

JAPAN (continued)

KOHJIN CO., LTD.

Polychlal	Yatsushiro *Cordelan* (staple)
Rayon	Yatsushiro (staple)

KURARAY CO., LTD.

Polyester	Saijo & Tamashima *Kuraray Polyester* (yarn & staple)
Rayon	Saijo & Tamashima *Three Golden Horses* (reg yarn)
Vinal	Okayama *Kuralon* (yarn & staple)

KUREHA CHEMICAL INDUSTRY CO., LTD.

Saran	Mibu *Krehalon* (yarn, monofil & staple)
Vinyon	Mibu *Vicion* (monofil)

MITSUBISHI RAYON CO., LTD. •

Acetate	Toyama (yarn & tow)
Acrylic	Otake *Finel, Silpalon, Vonnel* (yarn & staple)
Polyester	Toyohashi *Soluna* (yarn), Lunaace (staple)
Triacetate	Toyama (yarn)

NIPPON ESTER CO., LTD.(subsidiary of Unitika, Kanebo and Mitsubishi Chemical Industry)

Polyester	Okazaki & Sabae *Unitika Ester, Kanebo Ester* (yarn & staple)

NISSHINBO INDUSTRIES, INC.

Rayon	Tokushima (staple)
Spandex	Tokushima *Mobilon*

NITIVY CO., LTD.

Vinal	Fujieda *Niti-Vilon, Solvron, Vilon* (yarn)

OMIKENSHI CO., LTD.

Rayon	Kakogawa (yarn & staple)

TEIJIN LTD.

Aramid	Iwakuni & Matsuyama *Technora, Teijinconex* (yarn & staple)
Nylon 6	Mihara *Teijin Nylon* (yarn)
Polyester	Iwakuni, Matsuyama & Tokuyama *Teijin-Tetoron* (yarn & staple)
Vinyon	Iwakuni *Teviron* (yarn)

TEIJIN ACETATE LTD. (subsidiary of Teijin Ltd.)

Acetate	Matsuyama *Teijin-Acetate* (yarn)

TOHO RAYON CO., LTD.

Acrylic	Mishima *Beslon* (staple & tow)
Rayon	Tokushima *Tovis* (staple)

TORAY- DU PONT COMPANY LTD.

Spandex	Shiga *Opelon* (fused multifil)

TORAY INDUSTRIES, INC.

Acrylic	Ehime *Toraylon* (staple)
Nylon 6	Aichi, Ishikawa*, Nagoya, Okazaki & Shiga *Amilan,Toray Nylon* (yarn & staple)
Nylon 6/66 copolymer	Aichi *Tapilon* (yarn)
Nylon 66	Aichi, Ishikawa & Okazaki *Promilan* (yarn)
Polyester	Ehime, Ishikawa, Mishima & Okazaki *Toray Tetoron* (yarn & staple)

JAPAN (continued)

TORAY-MONOFILAMENT CO., LTD.

Nylon 6	Okazaki *Toray Nylon* (monofil)

TOYO CHEMICAL CO., LTD.

Vinyon	Ofuna *Envilon* (yarn & monofil)

TOYOBO CO., LTD. •

Nylon 6	Tsuruga *Toyobo Nylon* (ind & reg yarn)
Polyester	Iwakuni & Tsuruga *Toyobo Ester* (ind & reg yarn, staple & spunbonded)
Promix	Tsuruga *Chinon* (yarn)
Rayon	Iwakuni *Tufcel* (staple)
Spandex	Tsuruga *Espa*

UNITIKA LTD.

Nylon 6	Uji *Unitika Nylon* (yarn, monofil & staple)
Polyester	Okazaki *Ester Marix* (ind yarn & spunbonded)

UNITIKA KASEI CO., LTD.

Vinal	Sakoshi (Akoh City) *Mewlon* (yarn, monofil & staple)

UNITIKA RAYON CO., LTD.

Rayon	Okazaki & Uji (ind & reg yarn)

YOSHIDA KOGYO K.K.

Polyester	Kurobe (yarn)

OLEFIN FIBER

ASAHI CHEMICAL INDUSTRY CO., LTD. Moriyama (P spunbonded)

CHISSO POLYPRO FIBER CO., LTD. Moriyama *Chisso Polypro, ES Fiber* (P yarn & staple)

DAIWABO CO., LTD. Hanma *Daiwabo Polypro, NBF Fiber* (E & P staple)

HAGIHARA INDUSTRY CO., LTD. Kurashiki (E monofil & film)

HIRATA SPINNING CO., LTD. Yokkaichi *Hiralon* (E & P yarn & monofil)

INABA SEIKO, LTD. Gamagori (E monofil)

KANEYA SEIKO, LTD. Hokkaido & Kushiro (E & P onofil)

KUREHA CHEMICAL INDUSTRY CO., LTD. Mibu *Kureha Polypropylene* (P monofil)

MARUAI CO., LTD. Toyohashi (E monofil)

MITSUBISHI RAYON CO., LTD. Toyohashi *Mitsubishi Pylen* (P yarn & staple)

NAGANO KAKO CO., LTD. Nagano (E monofil)

SHOWA POLYMER CO., LTD. Ibaraki (E monofil & film)

SUNREX INDUSTRY CO., LTD. Yokkaichi (E monofil & P spunbonded)

JAPAN (continued)

TAI-RAY CO., LTD. Mito *Danzex, Danzex Lite, Lipion* (E monofil P yarn & monofil)

TANIYAMA CHEMICAL INDUSTRY CO., LTD. Okayama *Tanikalon* (E monofil)

TOA WOOL SPINNING & WEAVING CO., LTD. Tomari *Toabo Polypro* (P staple)

TONEN TAPYRUS K.K. (TONEN TAPYRUS CO., LTD.) Kawasaki *Tapyrus* (P spunbonded)

TOYOBO CO., LTD. Iwakuni (P staple)

UBE-NITTO KASEI CO., LTD. Fukuyama & Gifu *Bulkilon F, Danline, Sun Line, Super Danline, Ube Nitto Polypro, UNK, UC Fiber* (E & P monofil & P yarn & E & P staple)

DAIDO KASEI Osaka

FUJIMOTO SANGYO Osaka

OKAMOTO CHEMICAL Ehime

SAKAI KASEI Osaka

SANTO CHEMICAL Aichi

SEKISUI CHEMICAL Amagasaki & Nara

TOYAMA Chiba

TOYO SODA Yokkaichi

WAKO SPINNING CO. Gifu

YAMAJIN TEXTILE Fukui

GLASS FIBER

ASAHI FIBER GLASS CO., LTD. Ibaraki & Shonan *Glasslon*

ASAHI-SCHWEBEL CO., LTD. Moriyama

CENTRAL GLASSFIBER CO., LTD. Matsusaka

FUJI FIBER GLASS CO. Moka

KANEBO, LTD. Gunma *Textoglass*

NIPPON GLASS FIBER CO., LTD. Tsu *Micro Glass*

THE NIPPON MINERAL FIBER MFG. CO. Tarui & Yuki *Superfine*

NITTO BOSEKI CO., LTD. Fukushima *Iceberg*

PARAMOUNT GLASS MFG. CO., LTD. Koriyama & Suzuka *Fether Glass*

UNITIKA U.M. GLASS CO., LTD. Kyoto

KENYA

AFRICA SYNTHETIC FIBER LTD.
Nylon 6 — Thika (yarn)
Polyester — Thika (staple)

JAYDEES LTD.
Polyester — Nairobi (yarn)

KENYA FIBRE CORPORATION LTD.
Polyester — Nanyuki (yarn & staple)

KISUMU COTTON MILL (KICOMI)
Polyester — Kisumu

SUNFLAG LTD.
Polyester — Nairobi (yarn)

OLEFIN FIBER

UNISACK LTD. Thika (P film)

KOREA PEOPLE'S DEMOCRATIC REPUBLIC OF (NORTH)

A number of manufactured fiber plants are said to be operating in North Korea (see June 1970 *Organon* issue, page 113); however, no data for this country are recorded in any table of this issue due to lack of reliable information.

KOREA REPUBLIC OF (SOUTH)

CHEIL SYNTHETIC TEXTILES COMPANY
Polyester — Kumi *Eslon* (yarn & staple)

DAEHAN SYNTHETIC FIBER COMPANY
Polyester — Ulsan *Acelan* (yarn & staple)

GORYEO NYLON CORPORATION LTD.
Nylon 6 — Kyungsan Kun *Kolon* (yarn)

HANIL SYNTHETIC FIBER INDUSTRIAL COMPANY
Acrylic — Masan *Hanilon* (staple)

JEIL SYNTHETIC FIBERS COMPANY*
Polyester — Seoul *Oplen* (yarn)

KOHAP, LTD.*
Nylon 6 — Shihung *Palmylon* (yarn & staple)
Polyester — Shihung *Palmylon* (yarn & staple)

KOLON INDUSTRIES INC.
Nylon 6 — Kumi, Taegu *Kolon* (yarn)
Polyester — Kumi *Kolon* (yarn)

SAMYANG COMPANY, LTD.
Polyester — Chunju *Triron* (yarn & staple)

KOREA REPUBLIC OF (SOUTH) (continued)

SUNKYONG FIBRES LTD.
Acetate — Suwon *Sunkyung* (yarn & tow)
Polyester — Suwon & Ulsan *Sunkyong* (yarn & staple)

TAEKWANG INDUSTRIAL COMPANY
Acrylic — Ulsan *Acelan* (staple)
Spandex — Ulsan *Acelan* (yarn)

TONGKOOK FIBRES LTD.
Polyester — Kumi* (yarn)

TONGYANG NYLON COMPANY
Nylon 6 — Anyang & Ulsan *Toplon* (yarn)
Polyester — Ulsan *Toplon* (yarn)

TONGYANG POLYESTER COMPANY
Polyester — Ulsan *Toplon* (yarn)

WONJIN RAYON COMPANY, LTD.
Rayon — Donong *Coray* (reg yarn & staple)

OLEFIN FIBER

JEIL SYNTHETIC FIBERS COMPANY Seoul *Oplene* (P yarn & staple)

KOHAP, LTD. Shihung *Happylon, Pylon* (P staple)

KUMSUNG SYNTHETIC FIBER CO., LTD. Seoul *Hopelon, Polon* (P staple) (idle)

LIBYA

LIBYA NATIONAL OIL CORPORATION (LINOCO)
Nylon 6 — Marsa Al-Brega* (yarn)
Polyester — Marsa Al-Brega* (staple)

LUXEMBOURG

TECHNOFIBRES
Polyester — Mertert (yarn)

Production and capacity data are combined with Belgium and the Netherlands under "Benelux" on pages 104 - 105.

OLEFIN FIBER

DU PONT FIBRES S.A. Contern-Hesperange *Typar* (P spun-bonded)

MALAYSIA

ALIFFIL SYNTHETIC FIBRE SDN. BHD.
Polyester — Penang (yarn)

MALAYSIA (continued)

ALLIED MALAYAN TEXTILE BHD.
Rayon — Penang *Teteron* (yarn)

ARAB-MALAYSIAN DEVELOPMENT BHD.
Rayon — Perak *Teteron* (yarn)

CHEMPAKA NEGRI LAKSHMI TEXTILES SDN. BHD.
Polyester — Negeri *Sembilan* (yarn)
Rayon — Negeri *Teteron* (yarn)

HING YIAP FIBREMAKERS
Polyester — Johor (yarn)

KWALITY TEXTILES (M) SDN. BHD.
Polyester — Kedah *Teteron* (yarn)
Rayon — Kedah *Teteron* (yarn)

MWE SPINNING MILLS SDN. BHD.
Polyester — Penang *Teteron* (yarn)
Rayon — Penang *Teteron* (yarn)

PENFIBRE SDN. BHD.
Nylon — Penang (staple*)
Polyester — Penang (staple)

QUALINIT SDN. BHD.
Polyester — Penang (yarn)

SOUTEX SENDIRIAN BERHAD
Polyester — Batu Pahat (yarn & staple)

SOUTH ASIA FIBRE INDUSTRIES SDN. BHD.
Polyester — Perak (yarn)

TEXFIBRE (SELANGOR) SDN. BHD.
Polyester — Kuala Lumpur (yarn)

TOOTAL THREAD MALACCA SDN. BHD.
Polyester — Malacca (yarn)

VERTEX FIBRE SDN. BHD.
Nylon — Perak (yarn)

MALTA

NYLON KNITTING CO. LTD.
Nylon 6 — Qormi (yarn)

Production and capacity data are combined with Italy.

MEXICO

CELANESE MEXICANA, S.A.
Acetate — Ocotlán, Jalisco (yarn & staple)
Acrylic — Zacapu, Michoacán (staple, tow & tops)
Nylon 6 — Ocotlán & Toluca, México *Duracel, Nycel* (yarn & staple)
Polyester — Ocotlán, Querétaro & Toluca *Crolan* (yarn & staple)

MEXICO (continued)

CELULOSA Y DERIVADOS, S.A.

Acrylic	Atequiza, Jalisco. *Crysel* (staple, tow & tops)
Rayon	Monterrey, Nuevo León. (ind & reg yarn)

FIBRAS QUIMICAS, S.A.

Nylon 6	Monterrey, Nuevo León. *Supernylon Cydsa* (yarn & monofil)
Polyester	Monterrey. *Terlenka* (yarn)

FIBRAS SINTETICAS, S.A.

Acrylic	Cotaxtla, Veracruz. *Fisisa* (staple, tow & tops)
Nylon 6	Mexico, D.F. *Fisisa* (yarn & monofil)
Polyester	Cotaxtla & Mexico City. *Fisisa* (yarn & staple)

FIBRASOMNI, S.A.*

Nylon 6	Ixtapalapa, D.F. *Omni Nylon* (monofil)
Saran	Ixtapalapa. *Omni Saran* (monofil)

INDUSTRIAS PETROQUIMICAS MEXICANAS, S.A.

Polyester	El Salto, Jalisco. *Inpetmex* (yarn)

KIMEX S.A.

Nylon 6	Tlalnepantla, México. *Aztecron* (yarn)
Polyester	Tlalnepantla. *Kintrel* (yarn)

NYLON DE MEXICO, S.A.

Nylon 6	La Leona, Nuevo León. *Nylfil* (yarn & staple)
Polyester	La Leona. *Delcron* (yarn, staple, tow & fiberfill)
Spandex	La Leona. *Likra* (fused multifil)

PLASTICA MODERNA, S.A. DE C.V.

Nylon 6	Tlalpan, D.F. *Perlux* (monofil)

PRODUCTOS PLASTICOS DE PUEBLA, S.A.

Nylon 6	Puebla, Puebla. *Prolon* (monofil)

OLEFIN FIBER

FIBRASOMNI, S.A. Ixtapalapa, D.F. *Politen Omni* (E monofil), *Polyprop Omni* (P yarn & monofil)

INDUSTRIAS POLIFIL, S.A. Ixtacuixtla, Tlaxcala. *Pliana* (P yarn & staple)

PLASTICOS INDUSTRIALIZADOS, S.A. Monterrey, Nuevo Leon (P staple)

OLEFIN FILM FIBER, only

HILOS Y CORDELES, S.A. Tlalnepantla, México

PLASTICEL, S.A. Monterrey, Nuevo León. (*Plasticel*)

POLISAC, S.A. (affiliate of Nylon de México, S.A.), Guadalajara, Jalisco (*Polisac*)

GLASS FIBER

VITRO-FIBRAS, S.A. Zacatenco, D.F. *Vitrofibras*

NETHERLANDS

AKZO FIBRES AND POLYMERS DIVISION, ENKA bv

Aramid	Arnhem, Emmen. *Arenka* (yarn)
Nylon 6	Emmen. *Enka Perlon Enkalon* (yarn)
Polyester	Emmen. *Diolen, Terlenka* (yarn & staple)
Rayon	Arnhem (ind yarn) & Ede (reg yarn)

DU PONT DE NEMOURS (NEDERLAND) N.V.

Spandex	Dordrecht. *Lycra* (fused multifil)

OLEFIN FIBER

LANKHORST TOUWFABRIEKEN B.V. Sneek. *Tiptolene* (E monofil & P film)

T.T.C. POLYOLEFINS B.V. Nijverdal. (P monofil, film & staple)

N.V. VERTO. Rotterdam. (P film)

GLASS FIBER

SILENKA B.V. Hoogezand (Groningen). *Silenka*

Artificial (cellulosic) production and capacity data are combined with Belgium on pages 108 - 111. Synthetic (noncellulosic) production and producing capacity data are combined with Belgium and Luxembourg under "Benelux" on pages 104 - 107.

NICARAGUA

OLEFIN FIBER

MANUFACTURERA CENTRO AMERICANA S.A. (MACEN)
Managua. (P film)

NIGERIA

NICHEMTEX INDUSTRIES LTD.

Polyester	Ikorodu, Lagos. *Nigerlene* (yarn & staple)

NORWAY

OLEFIN FIBER

A/S PLATON, AVD. TEKSTIL. Notodden. *Filmtex* (E & P film)

NORFIL-NORPACK A/S. Stavern, near Larvik. *Akvaflex* (P yarn, E & P monofil & film)

STAL OG TAU. Tonsberg. *Norseflex* (P film)

GLASS FIBER

NORSK GLASSFIBER A/S. Birkeland

PAKISTAN

BENGAL FIBER INDUSTRIES, c/o BENGAL OIL MILLS LIMITED
Nylon 6 — Karachi *Nylpak* (yarn)
Polyester — Karachi (yarn & staple)

DILON LIMITED
Nylon 6 — Landhi *Dilon* (yarn)
Polyester — (yarn*)

GATRON INDUSTRIES LIMITED
Polyester — Hub Chowki (yarn)

HASHWANI GROUP
Polyester — Sind Province (yarn)

ICI PAKISTAN MANUFACTURERS LTD.
Polyester — Lahore *Tere-Pak* (staple)

NATIONAL FIBERS LIMITED
Polyester — Korangi, Karachi (yarn & staple)

NILOM NYLON MILLS LIMITED
Nylon 6 — Lyallpur *Nilom* (yarn & monofil)

PAK FIBRE INDUSTRIES LIMITED
Polyester — Hub Chowki (yarn)

POLYTEX
Polyester — (yarn)

RAVI RAYON LIMITED
Acetate — Kala Shah Kaku, Sheikhupura District *Krasil* (yarn)

RUPALI POLYESTER LIMITED
Polyester — Karachi (yarn & staple)

S.G. RAYON MILLS LIMITED
Polyester — Karachi (yarn)

SYNTHETIC POLYLON
Polyester — Katri (yarn), Hub Chowki (staple)

PERU

BAYER INDUSTRIAL S.A.
Acrylic — Lima *Dralon* (staple)

FILAMENTOS INDUSTRIALES, S.A.
Nylon 6 — Lima* (yarn)
Polyester — Lima (yarn)

MANUFACTURA NYLON S.A.
Nylon 6 — Vitarte, near Lima (yarn)
Polyester — Vitarte *Diolen* (staple)

MANUFACTURAS DEL SUR S.A.
Nylon 6 — Arequipa *Long Life, Mistilon* (yarn)
Polyester — Arequipa (yarn & staple)

PERU (continued)

RAYON INDUSTRIAL S.A.
Acetate — Lima (yarn)
Nylon — Lima (staple)
Polyester — Lima *Forcel* (yarn, staple, tow & tops)

RETEX PERUANA, S.A.
Nylon 6 — Ventanilla, Callao (yarn)

OLEFIN FILM FIBER, only

NORSAC S.A. Trujillo

POLICEL DEL PERU S.A. Lima

SACOS DEL SUR S.A. Arequipa

SACOS PISCO S.A. Pisco

PHILIPPINES, REPUBLIC OF THE

FIBERTEX CORPORATION
Nylon 6 — Taytay, Rizal *Texfiber* (yarn)

FILIPINAS SYNTHETIC FIBER CORPORATION
Polyester — Sta. Rosa, Laguna *Filsyn* (yarn & staple)

HI-LON MANUFACTURING CORPORATION
Nylon 6 — Calamba, Laguna *Philippine Polyamide* (yarn)

INDOPHIL FIBER CORPORATION
Rayon — Manila (staple)

LAKEVIEW INDUSTRIAL CORPORATION
Polyester — Carmona, Rizal *Licron* (yarn & staple)

OLEFIN FIBER

INDUSTRIAL TEXTILE MANUFACTURING CO. (ITEMCOP)
Mandaluyong, Rizal (P film)

MANILA CORDAGE COMPANY Manila (P film)

POLAND

CHODAKOWSKIE ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX"
Rayon — Sochaczew (reg yarn)

WROCŁAWSKIE ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX"
Rayon — Wrocław (reg yarn)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-ANILANA"
Acrylic — Łódź *Anilana* (staple)
Azlon — Łódź *Wipolan* (staple, casein base)

POLAND (continued)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-CELWISKOZA"

Polyester	Jelenia Góra *Elana* (staple)
Rayon	Jelenia Góra (staple)
Spandex	Jelenia Góra (pilot plant) *Elaston* (yarn)

ZAKŁADY WŁOKIEN CHEMICZNYCH "ELANA"

Polyester	Toruń, Bydgoszcz *Torlen* (yarn), *Elana* (staple)

ZAKŁADY WŁOKIEN CHEMICZNYCH "STILON"

Nylon 6	Gorzów Wielkopolski *Lanastil, Stilon* (yarn) *Polana* (staple)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-WISKORD" •

Rayon	Szczecin-Zydowce (reg yarn)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-WISTOM"

Rayon	Tomaszów Mazowiecki, Łódź (ind & reg yarn & staple)

OLEFIN FIBER

ZAKŁADY PRZEMYSŁU LNIARSKIEGO LENKO Bielsko Biała (P film)

ZAKŁADY PRZEMYSŁU LNIARSKIEGO SKARBKOW Mirsk, Wrocław (P staple)

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-WISKORD" Szczecin-Zydowce (P staple)

GLASS FIBER

KROSNIENSKIE HUTY SZKŁA Krosno

ZAKŁADY WŁOKIEN CHEMICZNYCH "CHEMITEX-ANILANA" Łódź *Polsilon*

PORTUGAL

COMPANHIA INDUSTRIAL DE FIBRAS ARTIFICIAIS (CIFA), S.A.R.L.

Nylon 6	Sobrado, Valongo *Cifalon* (yarn)
Rayon	Sobrado (reg yarn & staple)

FIBRAS SINTETICAS DE PORTUGAL, S.A.R.L. (FISIPE)

Acrylic	Lisbon *Vonnel* (staple, tow & tops)

FINICISA - FIBRAS SINTETICAS, S.A.R.L.

Polyester	Portalegre, Alto Alentejo *Terylene* (staple)

HOECHST PORTUGUESA S.A.R.L.

Nylon	Porto (monofil)

TÊXTIL ARTIFICIAL DO PORTO, LDA.

Rayon	Porto (reg yarn)

OLEFIN FIBER

ALICATIFAS DA LOUSA (P staple)

PORTUGAL (continued)

FERCOL (P staple)

LUSOTUFO (P staple)

QUIMIGAL - QUIMICA DE PORTUGAL, E.P. Barreiro (P staple & film)

OLEFIN FILM FIBER, only

CERFIL Maia - Douro

CORDEX - COMPANHIA INDUSTRIAL TEXTIL, S.A.R.L. Esmoriz

COTESI - COMPANHIA DE TEXTEIS SINTÉTICOS S.A.R.L. Carvalhos

EUROFIL - INDUSTRIAS DE PETROLEOS PLASTICOS E FILAMENTOS, S.A.R.L. Lisbon

FABRICA DE TAPETES VITORIA Mira d'Aire

FERNANDES & COSTA, LDA. Seia

MANUEL RODRIGUES DE LIMA & FILHOS Cortegaca

MANUEL RODRIGUES D'OLIVEIRA, S.A. LDA. M Maia

QUINTAS & QUINTAS Povoa de Varzim

SICOR - SOCIEDADE INDUSTRIAL DE CORDOARIA S.A.R.L. Cortegaca

GLASS FIBER

QUIMIGAL - QUIMICA DE PORTUGAL, E.P. • Barreiro

ROMANIA

CIMBINATUL DE FIBRE SINTETICE CIMPULUNG MUSCEL

Polyester	Near Brasov (yarn)

COMBINATUL DE FIBRE ARTIFICIALE

Rayon	Braila, Dej* & Suceava* (ind yarn & staple)
Polyester	Vaslui (yarn)

FABRICA DE FIBRE ARTIFICIALE "VISCOFIL"

Rayon	Popesti-Leordeni, near Bucuresti (reg yarn)

FABRICA DE FIBRE ARTIFICIALE "VISCOZA"

Rayon	Lupeni (reg yarn)

INTREPRINDERA DE FIBRE SINTETICE CORABIA

Polyester	North of Pleven (yarn)

UZINA DE FIBRE SINTETICE IASI

Polyester	Iasi *Teron* (yarn, staple, tow & tops)

UZINA DE FIBRE SINTETICE SAVINESTI

Acrylic	Savinesti, near Piatra Neamt (Bacau Region) *Melana* (staple & tops)
Nylon 6	Savinesti *Relon* (yarn & staple)

SOUTH AFRICA, REPUBLIC OF

CONSOLIDATED TEXTILE MILLS (part of Frame Group of Companies)
Polyester — Jacobs, Natal (yarn & staple captive)

HOECHST SOUTH AFRICA (PTY.) LTD.
Polyester — Milnerton, Cape Province *Trevira* (staple)

SOUTH AFRICAN NYLON SPINNERS (PTY.) LIMITED
Nylon 66 — Bellville, Cape Province *Bri-Nylon* (yarn)
Polyester — Bellville & Hammarsdale, Natal *Terylene* (yarn)

OLEFIN FIBER

ROMATEX MILLS Jacobs, Natal (P film)

SPAIN

BRILEN S.A.
Polyester — Barbastro, Huesca & Igualada, Barcelona (yarn & staple)

COURTAULDS FIBRES S.A.
Acrylic — Prat de Llobregat, Barcelona *Courtelle* (staple & tow)

DE FIBER S.A.
Nylon 66 — Vendrell, Tarragona

INDUSTRIAS DEL ACETATO DE CELULOSA, S.A. (INACSA)
Acetate — La Bailiona, Barcelona (yarn)

INDUSTRIAS QUIMICAS TEXTILES S.A. (INQUITEX)
Nylon 6 — Andoain, Guipuzcoa *Carbyl, Nylhair, Trinyl* (yarn & staple)

LA SEDA DE BARCELONA, S.A.
Nylon 6 — Alcalá de Henares, Madrid *Dayan, Enkalon* (yarn & staple)
Polyester — Prat de Llobregat, Barcelona *Terlenka* (yarn & staple)
Rayon — Prat de Llobregat (reg yarn)

MONTEFIBRE HISPANIA S.A.
Acrylic — Miranda de Ebro, Burgos *Leacril* (staple)

NUREL S.A.
Nylon 6 — Zaragoza, Zaragoza *Nurel* (yarn & staple)
Polyester — Zaragoza *Terylene* (yarn & staple)

SOCIEDAD ANONIMA DE FIBRAS ARTIFICIALES (SAFA)
Nylon 66 — Blanes & San Julian de Ramis, Gerona *SAFA* (yarn & staple)
Polyester — Blanes *Tergal, Teriber* (yarn & staple)

SOCIEDAD NACIONAL DE INDUSTRIAS APLICACIONES CELULOSA ESPANOLA, S.A. (SNIACE)
Nylon 6 — Torrelavega, Santander *Lilion* (yarn & staple)
Rayon — Torrelavega (staple)

SPAIN (continued)

OLEFIN FIBER

PAULAR, S.A. - EMPRESA PARA LA INDUSTRIA QUIMICA
Puertollano, C.R. *Istrakin* (P monofil & film)

PROFILEX (P staple)

PROPILAN (P staple)

SERINA TEXTIL (P staple)

SOCIEDAD ANONIMA TALO ESPANOLA (SAITES) Sabadell, Barcelona (P staple & film)

TEXTILE ARMENGOL Bruch, Barcelona (P staple & film)

OLEFIN FILM FIBER, only

CONDEROLS S.A. Granada

CORDELERIAS BARAS S.A. Gijon, Asturias

CORDELERIAS MAR S.A. Vigo, Pontevedra

HILATURAS Y CORDELERIA S.A. - "HILCOSA" Barcelona

HIRESA Callosa de Segura, Alicante

YUTE INDUSTRIAL S.A. Valencia

GLASS FIBER

CRISTALERIA ESPANOLA - DIVISION FIBRA DE REFUERZO
Alcalá de Henares, Madrid *Fibra de Refuerzo VETROTEX*

SRI LANKA

CEYLON PETROCHEMICAL CORPORATION
Nylon 6 — Sapugaskan (yarn & monofil)

SWEDEN

SVENSKA RAYON AKTIEBOLAGET
Rayon — Alvenas, Valberg (staple)

OLEFIN FIBER

SONDEX AB Malmo *Laveten* (E & P monofil)

GLASS FIBER

SCANDINAVIAN GLASFIBER AKTIEBOLAG Falkenberg

SWITZERLAND

EMS INDUSTRIES, LTD.
Nylon 6 — Ems, Graubünden *Grilon* (staple)
Polyester — Domat/Ems *Grilene* (staple)

SWITZERLAND (continued)

NOYFIL S.A.
Nylon 6 — Stabio (yarn)
Polyester — Stabio (yarn)

VISCOSUISSE A.G.
Nylon 6/66 — Emmenbruecke, Luzern & Widnau, St. Gallen. *Nylsuisse, Flixor* (yarn & staple)
Polyester — Widnau. *Tersuisse* (yarn)

OLEFIN FILM FIBER, only

AROVA SCHAFFHAUSEN A.G. Schaffhausen

POLY-STEGN A.G. Flurlingen

VOGT & CO. Reinach

TAIWAN

BAN SHIN FIBER CO., LTD.
Nylon 6 — Kaohsiung. *Sun & Colorful Seal* (yarn)

CENTURY EVERGREEN CORP.
Polyester — Tainan. *Centuron* (yarn)

CHENTA CHEMICAL INDUSTRIAL CORPORATION
Nylon 6 — Kaohsiung. *Rabbit* (yarn)

CHI YURN FIBER MILLS
Nylon — Tao Yuan (staple)

CHINA MAN-MADE FIBER CORPORATION
Rayon — Tou Fen. *Queen* (reg yarn & staple)

CHUNG SHING TEXTILE CO., LTD.
Nylon 6 — Tao Yuan. *Tasinlon, Threegun* (yarn)
Polyester — Tao Yuan. *Tasinlon* (yarn & staple)

FAR EASTERN LTD.
Polyester — Hsin Chu. *Eastlene, Eastlon* (yarn & staple)

FORMOSA CHEMICALS & FIBER CORPORATION (part of Formosa Plastics Group)
Nylon 6 — Chang Hwa. *Sunylon* (yarn)
Rayon — Chang Hwa. *Tarsiyon* (reg yarn & staple)

FORMOSA PLASTIC CORPORATION - Tairylan Plant (part of Formosa Plastics Group)
Acrylic — Kaohsiung & Lanchu. *Tairylan* (staple, tow & tops)

FUPONT SYNTHETIC INDUSTRIAL CO.
Nylon 6 — Tao Yuan. *Full-long* (yarn)

HUALON CORPORATION
Nylon 6 — Chungho, Tao Yuan & Tou Fen (yarn)
Polyester — Chungho, Tou Fen & Yim Kao. *Hualon* (yarn & staple)

HUNG CHOU CHEMICAL INDUSTRY COMPANY, LTD.
Polyester — Kwei Shan. *Hunvira* (yarn)

TAIWAN (continued)

JANG DAH NYLON INDUSTRIAL CORP., LTD.
Nylon 6 — Hsin Tien. *Yuan Pao* (yarn)

NAN-YA PLASTIC CO., POLYESTER FIBER DIVISION (part of Formosa Plastics Group)
Polyester — Tai Shan. *Tairilin* (yarn & staple)

SAN YUAN HSING ENTERPRISE COMPANY
Nylon 6 — Kaosiung. (monofil - captive)

SHINKONG SYNTHETIC FIBERS CORPORATION
Polyester — Tao Yuan. *Shinlon* (yarn & staple)

SYNTHETIC FIBER MILLS CORPORATION
Nylon 6 — Tao Yuan. *Synlon* (yarn)

TA MING FIBERS INDUSTRIAL CORPORATION
Nylon 6 — Tao Yuan. *Ta Ming Nylon* (yarn)
Polyester — Tao Yuan. *Poylon* (yarn)

TAINAN SPINNING CO., LTD.
Polyester — Tainan & Tao Yuan. *Nanlon* (yarn)

TONG HWA SYNTHETIC FIBER CO., LTD.
Acrylic — Chu Pei. *Townflower* (staple & tow)

TUNG HO SPINNING WEAVING & DYEING CO., LTD.
Polyester — Tainan. *Pearlylene* (staple)

TUNTEX DISTINCT CORP.
Polyester — Hsin Su. *Tuntex* (yarn & staple)

UNITED SYNTHETIC FIBERS CORPORATION
Polyester — Tao Yuan. *King Long* (staple)

VANLON FIBERS INDUSTRIAL CORPORATION
Nylon 6 — Tao Yuan. *Vanlon* (yarn)
Polyester — Tao Yuan. *Vanlon* (yarn)

YU HO FIBER INDUSTRIAL CORPORATION
Polyester — Tao Yuan. *Luxlen* (yarn)

OLEFIN FIBER

CHIA YANG INDUSTRIAL CO., LTD. Hsi-Chih (P monofil)

CHIEN SUN PLASTIC INDUSTRIAL CO., LTD. Hsin-Chu (E & P film)

CHINA FOLEX CORPORATION Shih-Lin (E & P monofil)

CHUNG KUANG PLASTIC CO., LTD. Chang-Hua (E & P film)

FULLMARK INDUSTRIAL CO., LTD. Hsin-Chu (E & P monofil)

FUU WON CHEMICAL INDUSTRIAL CO., LTD. Tu-Chen (P yarn)

HSIEH CHIN FISHING NET COMPANY, LTD. Kaohsiung. *Hsieh Chin* (E monofil - captive)

HUNG FENG ENTERPRISE CO., LTD. Yang-Mei (P monofil)

IEN YI FIBER INDUSTRIAL CO., LTD. Chi-Do Goble (E monofil)

TAIWAN (continued)

JUI I CHEMICAL INDUSTRIAL CO., LTD. Tou Yuan (E & P monofil)

KUO HSIANG ENTERPRISE CO., LTD. Yang Mei (E & P monofil)

LIEN FU CHEMICAL COMPANY LTD. Tou Fen (E & P monofil)

MEI LON FIBER CO., LTD. Chang Hua (E monofil)

PAO TSUNG TAI INDUSTRIAL COMPANY LTD. Tainan (P film)

POLON FIBER INDUSTRIAL CO., LTD. Chung Li (P monofil)

SAN YANG INDUSTRIAL COMPANY LTD. Nei Hu Hsiang (P film)

TAI YEE CHEMICAL INDUSTRIAL CO., LTD. Chung Li (E & P monofil)

UNITED FIBER INDUSTRIAL CO., LTD. Chung Li (E & P monofil)

YAO CHENG PLASTIC CO., LTD. Pan Chiao (P yarn)

TANZANIA

SUN FLAG TEXTILE KNITWEAR MILLS LTD.
Polyester — Arusha (yarn)

THAILAND

ASIA FIBER CO., LTD.
Nylon 6 — Samut Prakarn *AFC* (yarn)

HANTEX CORPORATION LTD.
Nylon 6 — Mahacha, Samut Sakorn (yarn)

ORIENTAL FIBRE
Polyester — Samut Sakorn (yarn)

TEIJIN POLYESTER (THAILAND) LTD.
Polyester — Pathumthani, Bangkok *TEIJIN TETORON* (yarn & staple)

THAI MELON POLYESTER CO. LTD.
Polyester — Pathumthani, Bangkok (yarn & staple)

THAI RAYON CO., LTD.
Rayon — Ang Thong (staple)

TORAY NYLON THAI COMPANY
Nylon 6 — Bangkhen, Bangkok *TNT* (yarn & monofil)
Polyester — Bangkhen *TNT* (yarn)

TURKEY

AKRILIK KIMYA SANAYII A.S. (AKSA)
Acrylic — Yalova *Aksa* (staple)

DUSA ENDUSTRIYEL IPLIK SANAYII VE TICARET A.S.
Nylon 6 — Izmit (yarn)

TURKEY (continued)

FILAMENT SENTETIK IPLIK VE ELYAF SANAYII A.S.
Polyester — Bursa *Filament* (yarn & staple)

GEMLIK SUNI IPEK VE VISKOZ MAMULLERI SANAYII MUESSESESI (GEMLIK ARTIFICIAL SILK & VISCOSE PRODUCTS INDUSTRY) (Operated by the Sumerbank)
Rayon — Gemlik (yarn & staple)

INSA ISTANBUL NAYLON SANAYII A.S.
Nylon 6 — Istanbul *Islon* (yarn)
Polyester — Istanbul (yarn)

M.N. SABUNCU
Polyester — Adana *MNS* (yarn) (idle)

NERGIS A.S.
Polyester — Bursa (yarn)

POLYLEN SENTETIK IPLIK SANAYII A.S.
Polyester — Bursa *Polylene* (yarn)

SANCAK TUL SANAYII LTD., STI.
Polyester — Istanbul *Lalelen* (yarn) (idle)

SASA SUNI VE SENTETIK ELYAF SANAYII A.S.
Polyester — Adana *Perilon* (yarn & staple)

SENTETIK IPLIK FABRIKALARI, A.S. (SIFAS) (SYNTHETIC YARN FACTORIES CORPORATION)
Nylon 6 — Bursa *SIFAS* (yarn & staple)
Nylon 66 — Bursa (yarn)
Polyester — Bursa (yarn & staple)

SISAS
Polyester — Canakkale* (yarn)

TEKSTIPLIK SANAYII VE TICARET A.S.
Nylon 6 — Edime *Dimlon* (yarn)

YALOVA ELYAF VE IPLIK SANAYII VE TICARET A.S.
Acrylic — Yalova *Yalova* (staple & tow)
Modacrylic — Yalova *Yalova* (staple & tow)

OLEFIN FIBER

BEZCI ELYAF SANAYII A.S. Istanbul

DINARSU ELYAF SANAYII A.S. Cerkezkoy, Tekirdag (P staple)

ELSAN ELYAF SANAYII VE TICARET A.S. Istanbul (P staple)

HALICIOGLU ELYAF SANAYII A.S. Haskoy, Istanbul (P staple)

SESAS ELYAF SANAYII A.S. Istanbul

GLASS FIBER

CAM ELYAF SANAYII A.S. Cayirova-Gebze (Izmit)

UNION OF SOVIET SOCIALIST REPUBLICS

RAYON PLANTS reported at
Balakovo, Barnaul, Cherkassy (Ukraine), Kalinin, Kamensk, Kiev, Klin, Krasnoyarsk, Leningrad, Mogilev, Ryazan, Saratov, Sokol, Sverdlovsk and Svetlogorsk.
ACETATE PLANTS reported at
Engels, Fergana, Kirovakan and Moscow
NYLON PLANTS reported at
Barnaul, Chernigov, Daugavpils, Engels, Grodno, Kemerovo, Kiev, Klin, Leningrad, Rustavi, Shchekino and Zhitomer
SYNTHETIC (NONCELLULOSIC) FIBER PLANTS reported at
Kursk (polyester), Blagoveshchensk (polyester*), Kustanay (vinyon), Minsk (polyester), Mogilev (polyester), Navoi, Polotsk and Saratov(acrylic+modacrylic), Svetlogorsk (polyester)
GLASS FIBER PLANTS reported at
Astrakhan, Kalinin, Khabarovsk, Leningrad, Mingechaur, Moscow, Polotsk, Salavat, Saratov, Sevan and Severodonetsk

UNITED KINGDOM

COURTAULDS FIBRES LTD.

Acrylic	Grimsby, South Humberside *Courtelle* (staple & tow) *Courtek M* (bioactive staple) *Sekril* (high modulus staple)
Modacrylic	Coventry, West Midlands *Teklan* (staple & tow) *Neochtom FR* (staple & tow)
Polyacrylate	Coventry, *Inidex* (staple)
Rayon	Grimsby *Sarille* (staple) *Viloft* (staple & tow) Grimsby, *Tencel* (solvent- spun staple & tow)
Acetate	Coventry, Spondon, Derbyshire *Dicel* (yarn & tow)
Triacetate	Spondon *Tricel* (yarn)

DEAN DOVE LTD.

Polyester	Stanley, Durham (yarn)

DU PONT (U.K.) LTD.

Aramid	Maydown, Kevlar (yarn)
Spandex	Maydown, Londonderry, N. Ireland *Lycra* (fused multifil)

ECTONA FIBRES LTD.

Acetate	Siddick, Workington (cigarette tow)

HOECHST FIBRE INDUSTRIES U.K. LTD.

Polyester	Limavady, Londonderry, N. Ireland *Trevira* (yarn & monofil)

ICI FIBRES (part of ICI Chemicals and Polymers Ltd.)

Biconstituent	Doncaster, Yorkshire (staple)
Nylon 66	Doncaster, Gloucester, Gloucestershire, Pontypool & Wales *Bri-Nylon, Qazul, Quintesse, Tactel, Tactesse, Tendrelle, Timbrelle* (yarn, staple & tow)
Polyester	Pontypool *Terinda, Terylene* (yarn)

NYMOFIL PLC

Nylon 6/66	Poulton-le-Fylde, Lancashire (monofil)
Polyester	Poulton-le-Fylde (monofil)

PENNINE FIBRE INDUSTRIES LTD.

Nylon 6/66	Bradford (monofil)
Polyester	Bradford, West Yorkshire (staple & tow)

UNITED KINGDOM (continued)

PERI-LUSTA PLC

Nylon 6/66	Leek, Staffordshire (monofil)

OLEFIN FIBER

BELFAST ROPEWORK CO. PLC Birmingham, W. Midlands *Bluebell* (E & P monofil, P yarn, staple & film)

DON & LOW (HOLDINGS) LTD. Forfar, Angus, Scotland (P yarn, monofil, staple & film)

F. DRAKE (FIBRES) LTD Golcar, Huddersfield, Yorkshire *Gymlene* (P staple)

F. DRAKE & CO. OF GOLCAR LTD. Golcar, Huddersfield (P yarn)

HALL'S BARTON ROPERY LTD. Beverley, N. Humberside (P film and E & P monofil)

WM. HALLEY & SONS (MFG.) LTD. Dundee, Scotland

PLASTICISERS LTD. Drighlington, Yorkshire *Drylene* (E monofil), *Charisma, Duron, Fibrite, Tritor* (P yarn, monofil, film & staple)

POLYOLEFIN FIBRES & ENGINEERING LTD. Halifax, Yorkshire *Downspun* (P staple)

READICUT INT'L. PLC. Brighouse, W. Yorks

J & D WILKIE LTD. Kirriemuir, Angus, Scotland

OLEFIN FILM FIBER, only

AMOCO FABRICS & FIBERS CO., DIVISION OF AMOCO (U.K.) PLC Consett, Dundel, Durham

BONAR TEXTILES Dundee, Scotland

BRIDON FIBRES & PLASTICS LTD. Gateshead & Sunderland, Durham & Wallsend, Northumberland *Broplene, Red Star, Viking*

SCOTT & FYFE LTD. Tayport, Fife, Scotland

A.G. SCOTT TEXTILES LTD. Dundee, Scotland

SMITH & NEPHEW TEXTILES LTD. Newhey, near Rochdale, Lancashire *Polyweave*

SYNTHETIC INDUSTRIES (IRELAND) LTD. Newry, Down, N. Ireland

GLASS FIBER

FIBREGLASS PLC (Subsidiary of Pilkington Brothers PLC) Wrexham, Clwyd, Wales *Fibreglass*

T GLASS FIBRES PLC Camberley, Surrey & Hindley Green, Lancashire

FIBREGLASS-REGINA, a joint venture of FIBREGLASS PLC and the BBA GROUP PLC, is producing textile glass tissue (voile) at Liversedge and St. Helens, Merseyside.

UNITED STATES OF AMERICA

ALBANY INTERNATIONAL - MONOFILAMENT PLANT •

Fluoro	Homer, NY *Halar, Kynar, Tefzel* (monofil)
Nylon 6, 66 & 612	Homer (monofil)
Polyester	Homer (monofil - regular & hydrolysis resistant)

ALLIED-SIGNAL INC. ENGINEERED MATERIALS SECTOR, FIBERS DIVISION •

Nylon 6	Columbia, SC & Hopewell, VA *A.C.E., Anso-Tex, Anso IV HP, AnsoV Worry Free, Anso X, Capima, Caplana, Caprolan, Caprolan 2000, Caprolan 2000 Sea Gard, Caprolan 2000 Stay Gard, Captiva, Compet, Creme De Captiva, Hydrofil, Iron Clad Patina, Sea Gard, TEC* (yarn,monofil & staple)
Polyester	Moncure, NC *A.C.E., A.C.E. Sea Gard, Compet, Stay Gard* (yarn & monofil)

AMERICAN CYANAMID COMPANY, FIBERS DIVISION

Acrylic	Milton, FL *Creslan* (staple & tow)

AMERICAN POLYCRAFT, INC. •

Nylon 6	Dalton, GA (yarn)

AMETEK INC., SPECIAL FILAMENTS DIVISION •

Nylon 6, 66, 612 & 11	Odenton, MD (monofil)
Polyester	Odenton (monofil)
Saran	Odenton (monofil)

AVTEX FIBERS INC. •

Polyester	Lewistown, PA *Avlin* (yarn)
Rayon	Front Royal, VA *Aviloc Avril, Avril II, Avril III, Avril Prima* Fibers 40 & 43 (ind yarn & staple)

BASF CORPORATION FIBERS DIVISION

Nylon 6	Enka, NC, Anderson & Central, SC and Lowland, TN *Crepeset, Shimmereen, Vivana, Zefsport, Zeftron, Zeftron 500, Zeftron 500 ZX* (yarn & staple)
Polyester	Lowland *Golden Glow, Golden Touch, Silky Touch, Strialine, Ultra Touch* (yarn)
Rayon	Lowland *Zantrel, Zantrel Plus™* (staple)

BEAULIEU OF AMERICA, INC.•

Nylon 6	Bridgeport, AL (yarn)

BERKLEY & CO., INC. •

Nylon 6	Spirit Lake, IA (monofil)

CAMAC CORPORATION •

Nylon 6	Bristol, VA *Camalon* (yarn)

COLOR-FI, INC.

Nylon	Sumter & Trenton, SC (staple & tow)
Polyester	Sumter & Trenton (staple & tow)

UNITED STATES OF AMERICA (continued)

CONCORDE FIBERS, INC. •

Nylon 6	Jamestown, SC (yarn)

CORTLAND LINE COMPANY, INC.

Nylon 6	Cortland, NY (monofil - captive)

COURTAULDS FIBERS INC.

Rayon	Le Moyne, *Fibro* Mobile County, AL (staple)

DORSETT CARPET MILLS INC. •

Nylon 6	Chatsworth, GA (yarn)

E.I. DU PONT DE NEMOURS & COMPANY (INC.) •

FIBERS DEPARTMENT •

Acrylic	Camden, SC & Waynesboro, VA *Orlon* (staple & tow)
Aramid	Richmond, VA *Kevlar* (yarn), *Nomex* (yarn, staple & tow)
Nylon 66	Seaford, DE, Camden, SC, Chattanooga, TN and Martinsville, Richmond & Waynesboro, VA *Antron* (yarn, monofil, staple & tow)
Polyester	Kinston & Wilmington, NC, Camden & Charleston, SC *Dacron*, (yarn, staple, tow & fiberfill)
Spandex	Waynesboro *Lycra* (fused multifil or coalesced monofil)

POLYMER PRODUCTS DEPARTMENT

Nylon 6, 66, 612 & Polyester	Parkersburg, WV *Dacron, Dymetrol, Tynex, Vylor* (monofil of 50 denier & coarser)

EASTMAN KODAK COMPANY - EASTMAN CHEMICALS DIVISION

Acetate	Kingsport, TN *Chromspun, Estron* (yarn)
Polyester	Kingsport, TN *Kodel* (staple)

CAROLINA EASTMAN COMPANY

Polyester	Columbia, SC *Kodel* (staple)

FIBER INDUSTRIES

Polyester	Fayetteville, NC & Darlington, SC *Fortrel* (yarn & staple)

FIRESTONE FIBERS & TEXTILES COMPANY, DIVISION OF FIRESTONE TIRE & RUBBER COMPANY

Polyester	Hopewell, VA (yarn)

FOSS MANUFACTURING CO., INC. •

Polyester	Haverhill, MA (staple - captive)

GLOBE MANUFACTURING CO.

Spandex	Fall River, MA & Gastonia, NC *Cleerspan, DC_{100}, DC_{700}, Glospan* (fused multifil)

THE GOODYEAR TIRE & RUBBER COMPANY, POLYESTER DIVISION

Polyester	Scottsboro, AL & Point Pleasant, WV (yarn - captive)

UNITED STATES OF AMERICA (continued)

GULF FIBERS INC.
Nylon 6 — Le Moyne, Mobile County, AL (monofil)

HANOVER FIBERS DIVISION, GUILFORD MILLS, INC.
Nylon 6 — Gainesville, GA (monofil)
Polyester — Fuquay-Varina, NC (yarn & monofil)

HOECHST CELANESE CORPORATION
Acetate — Rock Hill, SC (Celriver) and Narrows, VA (Celco) (yarn, staple & tow)
Polyester — Salisbury & Shelby, NC and Spartanburg, SC *Ceylon, Comfort Fiber, ESP, Loftguard, PolarGuard, Prematill Soft, Prematill Plump, Serene, Superba, Trevira* (yarn, staple, tow, highloft & spunbonded)
PBI — Rock Hill (staple)
Vinyon — Rock Hill (staple)

JAMES RIVER CORP. •
Nylon 6/66 — Cantonment, FL *Cerex* (spunbonded)
Polyester — Milford, NJ and Simpsonville, SC *Polyweb* (thermal bond & melt blown)

JOHNSON FILAMENTS, INC. • (subsidiary of JWI Ltd.)
Nylon 6/66 — Williston, VT (monofil)
Polyester — Williston (monofil)

KAYSER-ROTH HOSIERY INC. YARN MANUFACTURING DIVISION
Nylon 66 — Creedmoor, NC (yarn - captive)

MONOFILAMENTS, INC.
Nylon 6/66 — Waynesboro, VA (monofil)
Polycarbonate — Waynesboro (monofil)
Polyester — Waynesboro (monofil)

MONSANTO CHEMICAL COMPANY FIBERS AND ENGINEERED PRODUCTS DIVISION
Acrylic — Decatur, AL *Acrilan, Acrilan II, Bi-Loft, Cy Fana, DuRel, Fi-Lana II, Pa-Qel, Pil-Trol, So Lara, So-Qel* (staple & tow)
Modacrylic — Decatur *SEF, SEF Plus* (staple & tow)
Nylon 66 — Pensacola, FL & Greenwood, SC *No-Shock, Ultron* (yarn, monofil & staple)

NORTH AMERICAN POLYESTER CORPORATION
Subsidary of North American Rayon Corporation
Polyester — Elizabethton, TN (staple)

NORTH AMERICAN RAYON CORPORATION
Rayon — Elizabethton, TN (ind & reg yarn & tow)

REEMAY, INC. •
Polyester — Old Hickory, TN *Reemay* (spunbonded)

SHAKESPEARE COMPANY, MONOFILAMENT DIVISION •
Nylon 6/66, 610 — Columbia, SC (monofil thread)
Polyester — Columbia (monofil thread)

UNITED STATES OF AMERICA (continued)

STAR FIBERS, INC.
Nylon 6 — Edgefield, SC *Starbrite* (staple)

TOLARAM FIBERS, INC. •
Nylon 6,6 — Ansonville, NC (yarn)
Polyester — Ansonville & Asheboro (yarn)

T.M.G. HOLDINGS, Affiliate of the Mann Group, Inc.
Acrylic — Williamsburg, Va *Zefran, Zefkrome* (staple)

WELLMAN, INC., MAN-MADE FIBER DIVISION
Nylon 6,/66 — Johnsonville, SC *Wellon, Wellstrand* (staple, tow & tops)
Polyester — Johnsonville *Fillwell, Wellene, Wellstrand* (staple & tow)

YKK ZIPPER CO.
Polyester — Macon, GA (yarn)

OLEFIN FIBER

ACS INDUSTRIES, INC. Woonsocket, RI (P yarn & multifil)

ALADDIN MILLS, INC. Dalton, GA (P yarn)

ALBANY INTERNATIONAL - MONOFILAMENT PLANT Homer, NY (P monofil)

ALLIED- SIGNAL, INC. ENGINEERED MATERIALS SECTOR, FIBERS DIVISION Chesterfield, VA *Spectra* (E yarn & staple)

AMERICAN MANUFACTURING COMPANY
LAFAYETTE ROPE DIVISION Lafayette, LA *Amco, American, Bondtie, Floterope, Ultraline* (E & P monofil [illegible])

AMERICAN POLYCRAFT, INC. Dalton, GA (P yarn & film)

AMETEK INC., SPECIAL FILAMENTS DIVISION Odenton, Md (E & P monofil)

AMOCO FABRICS & FIBERS COMPANY Andalusia & Roanoke, AL, Bainbridge, Hazlehurst & Nashville, GA, Salisbury, NC & Afton, VA *Amoveve, Condesa, Genesis, Marquésa Lana, Marquésa Lana ST, Patlon, Patlon Plus, Propex III, Synera* (P yarn, monofil, film & staple)

ARLIN MFG. CO., INC. Lowell, MA (P film)

ARMSTRONG WORLD INDUSTRIES, INC. Charlotte, NC (P film - captive)

AVTEX FIBERS INC. Front Royal, VA (P staple)

BEAULIEU OF AMERICA, INC. Dalton, GA (P yarn)

BERKLEY & CO. INC. Spirit Lake, IA (E & P monofil - captive)

BLUE MOUNTAIN INDUSTRIES Blue Mountain, AL *Gold Medal, Poly Autotwine, Poly Macramé, Polylasting, TY-EZ Polytape, Tylon, Tytite* (E & P film cordage)

BRIDON CORDAGE INC. Albert Lea, MN (P film cordage)

UNITED STATES OF AMERICA (continued)

BURLINGTON INDUSTRIES, INC. Greensboro, NC (P yarn)

CALIFORINA WEBBING INDUSTRIES, INC. Los Angeles, CA (P yarn)

CAMAC CORPORATION Bristol, VA (P yarn)

CHASE PACKAGING CORPORATION Portland, OR (P film industrial goods)

CIRTEX Dalton, GA (P film)

COLUMBIAN ROPE COMPANY Guntown, MS *Polypro 6* (E & P monofil & film)

CONCORDE FIBERS, INC. Jamestown, SC (P yarn)

CROWE ROPE COMPANY Warren, ME *Crowelon* (P monofil & film)

CUMBERLAND MILLS, INC. Dalton, GA (P yarn)

CUTLASS CARPET CO. Dalton, GA (P yarn)

DIAMOND MILLS, INC. Eton, GA (P yarn & film)

DORSETT CARPET MILLS INC. Chatsworth, GA (P BCF yarn)

E.I. DU PONT DE NEMOURS & COMPANY (INC.), FIBERS DEPT. Richmond, VA *Tyvek* (E spunbonded)

ELIZABETH WEBBING MILLS CO., INC. Central Falls, RI (P yarn & film)

ENSIGN-BICKFORD INDUSTRIES, INC., FILM FIBERS DIVISION Simsbury, CT (P film)

EXXON CHEMICAL AMERICAS, INDUSTRIAL TEXTILES DIVISION Kingman, KS and Summerville, SC (P monofil & film)

FIBERS & FABRICS OF GEORGIA, INC. (subsidiary of Georgia Synthetics, Inc.) Elberton, GA (PP yarns, fibrillated, roll embossed filaments & slit tape)

FIBRES SOUTH, INC. Trussville, AL *Polystar, Trustite, Tyrite* (P film, monofil, tapes & staple)

FILAMENT FIBER TECHNOLOGY INCORPORATED Lakewood, NJ and Salisbury, NC (P yarn)

FNT INDUSTRIES INC. Menominee, MI (E monofil)

FOSS MANUFACTURING CO., INC. Haverhill, MA (P staple - captive)

GENERAL FIBERS & FABRICS, INC. La Grange, GA (P film)

GEORGIA SYNTHETICS, INC. Elberton, GA (PP carpet backing, industrial fabrics)

UNITED STATES OF AMERICA (continued)

GFF HOLDING COMPANY (formerly N.S.I., INC.) Soperton, GA (P film - captive)

HERCULES INCORPORATED, HERCULES ENGINEERED POLYMERS COMPANY, FIBERS DIVISION Oxford, GA *Elustra, Herculon, Nouvelle* (P yarn & staple)

THE HOOVEN & ALLISON COMPANY Xenia, OH (P film)

INTEGRATED PRODUCTS, INC. Rome, GA (P staple)

J & J INDUSTRIES Dalton, GA (P yarn)

JAMES RIVER CORPORATION Milford, NJ, Simpsonville, SC, and Washougal VA (P spunbonded)

JOHNSON FILAMENTS Williston, VT (P monofil)

KIMBERLY-CLARK CORPORATION Corinth, MS, Balfour, NC, La Grange, GA & Neenah, WI *Accord, Duraguard, Evolution* (P spunbonded), *Cyclean, Evolution III* (P spunbonded/meltblown & laminate)

LAMBETH CORPORATION New Bedford, MA *Lambeth* (E & P monofil)

LAWRENCE HOSE COMPANY Burlington, NC (E monofil - captive)

LORETEX CORPORATION Guilderland Center, NY (E film- captive)

MIRAFI INC (subsidiary of Dominion Textiles) Moultrie, GA (P film - captive)

THE OSTERNECK COMPANY Lumberton, NC (P film)

PHILLIPS FIBERS CORPORATION (subsidiary of Phillips 66 Company) Rocky Mount, NC, Seneca & Spartanburg, SC, *Alpha, Marvess* (P yarn, staple & tow) *Ryton* (sulfar - staple)

POLYLOOM CORPORATION OF AMERICA Dayton, TN *Polyloom* (P split film)

RANGER TEXTILE CORP. (formerly Gladding Cordage Corp.) South Otselic, NY (P monofil)

REEMAY, INC. Old Hickory, TN *Typar* (P spunbonded)

SARLON INDUSTRIES, INC. Miami, FL (P monofil & film)

SHAKESPEARE MONOFILAMENT DIVISION Columbia, SC (P monofil)

SHUFORD MILLS, INC. Hickory, NC (P film cordage & twine)

SOLUTION FIBERS INC. Lafayette, GA *Better Body, Luxene* (P yarn)

SOUTHERN WEAVING, INC. Greenville, SC (P yarn)

STEVENS FIBER DIVISION, STEVENS LINEN ASSOC., INC. Dudley, MA (P staple)

UNITED STATES OF AMERICA (continued)

SUNSHINE ROPE MANUFACTURING INC. Miami, FL (E & P monofil, cordage)

SYNTHETIC INDUSTRIES Chickamauga & Dalton, GA (P film, yarn & staple)

SYNTHETIC INDUSTRIES, FIBRON DIVISION Chattanooga TN *Fibri-Cord, Fibri-Knit, Fibrilawn, Fibrilon* (P film)

TECHLON FIBERS CORPORATION Dalton, GA (P yarn)

TECHNOTRADE Dalton, GA (P yarn)

TOLARAM FIBERS, INC. Ansonville, NC (P yarn)

TRUSTITE DIVISION OF FIBRES SOUTH, INC. Clearfield, UT *Trustite, Tynite* (P film)

TWINE PRODUCTS CORPORATION New Orleans, LA (P film)

UNITED STATES ROPE COMPANY Menlo Park, CA (P monofil)

WALL INDUSTRIES, INC. Granite Quarry, NC (E & P monofil rope & cordage)

WALTRICH PLASTIC CORPORATION Walthourville, GA (P monofil)

WAYN-TEX, INC. Waynesboro, VA *Beamette, Waynfuf* (E & P monofil & P film captive, spunbonded)

WELLINGTON PURITAN MILLS (MONTAIR DIV.) Pilot Mountain, NC *Pur-Ty, Welitite* (P yarn & E & P monofil & film)

WELLINGTON SYNTHETIC FIBRES, INC. Leesville & Summerville, SC (P yarn & monofil)

TEXTILE PRODUCTS FROM OLEFIN

CONTINENTAL (P yarn)

CONWED CORP. Conwed Plastic Netting (P embossed film for netting)

DICEY (P yarn)

E.I. DU PONT DE NEMOURS & COMPANY (INC.) (E & P embossed film for netting)

NALLE, INC. (P embossed film for netting)

RIEGEL PRODUCTS CORPORATION *Polyweb* (P meltblown)

THE 3M COMPANY (P spunbonded)

GLASS FIBER

CERTAINTEED CORPORATION, FIBER GLASS REINFORCEMENTS DIVISION Wichita Falls, TX *RO99, SatinGlass, Stitchmat, Unifilo* (roving, woven roving, mat, chopped strand & ccombination product)

UNITED STATES OF AMERICA (continued)

FIBER GLASS INDUSTRIES, INC. Amsterdam, NY (roving & woven glass reinforcements)

GAF, BUILDING MATERIALS DIVISION Irwindale, CA (chopped) Nashville, TN (chopped)

GFT (GLASS FIBER TECHNOLOGY) Chester, SC (wet chopped for shingles)

LUNDY TECHNICAL CENTER Pompano Beach, FL *RoMHOglas* (metallized glass fiber roving & strand and nonwoven metalized glass mat)

MANVILLE SALES CORPORATION MATS, FIBER, & REINFORCEMENTS DIVISION Waterville, OH & Etowah, TN Ennis, TX *Chop-Pak, Dura-Glass, Star-Stran, Star-Rov, Tempstran, Star-Tex* (mat chopped strand,sliver, rovings & microfibers)

NICOFIBERS INC. Shawnee, OH *Conformat, Consurmat, Surmat* (mat)

NITTOBO-SCHWEBEL CORPORATION* (Yarn)

OWENS-CORNING FIBERGLAS CORPORATION Huntingdon, PA, Aiken & Anderson, SC and Amarillo, TX *Beta, Bi-Ply, Fiberglas, S-Glass, S-2 Glass* (yarn, roving, woven roving, mat, chopped & milled)

PPG INDUSTRIES, INC. FIBER GLASS Lexington & Shelby, NC (yarn, roving, woven roving, mat, chopped & milled, and rubber reinforcement)

SUPERIOR GLASS FIBERS, INC. Bremen, OH (mat)

URUGUAY

HILADOS SINTETICOS S.A. (HISISA)

Nylon 66	Estacion Manga, Montevideo *Hisilon* (yarn)

POLIMEROS URUGUAYOS S.A.

Polyester	San José, San José (staple)

SINTETICOS SLOWAK S.A.

Nylon 6	Montevideo *Crofil* (yarn & monofil)
Nylon 66	Montevideo *Hisilon* (yarn)
Polyester	Montevideo *Terpol* (yarn)

SUDAMTEX del URUGUAY S.A.

Acetate	Colonia (yarn)

OLEFIN FIBER

ARYN S.A. Montevideo (E monofil)

CINCA S.A. Montevideo (E film)

ELABORADORA DE ARPILLERA SINTETICA S.A. (E film)

VENEZUELA

C.A. INVERSIONES ARAGUA
Nylon 6 — Maracay *Sudalon* (yarn)

GOMELAST, C.A.
Spandex — Caracas *Spandaven* (yarn)

HILADOS FLEXILON
Nylon 6 — Caracas (yarn)
Polyester — Caracas (yarn)

MANTEX, C.A.
Acetate — Valencia (yarn)
Polyester — Maracay, Valencia *Fortrel* (yarn & staple)

SUDAMTEX DE VENZUELA, C.A.
Polyester — Maracay (yarn & staple)

YUGOSLAVIA

HEMTEKS
Polyester — Skopje, Macedonia *Maklen* (yarn & staple)

INCEL FABRIKA CELULOZE I VISKOZE
Polyester — Banja Luka, Bosna i Hercegovina *Belira* (yarn)
Rayon — Banja Luka (staple)

INDUSTRIJA SINTETICKIK VLAKANA (PROGRES)
Nylon 6 — Prizren, Kosovo Mitohijan *Supralon* (yarn)
Polyester — Istok, Kosovo Mitohijan & Prizren *Prizrenit* (yarn)

KEMICNA TOVARNA MOSTE
Nylon 6 — Ljubljana, Slovenia *Yulon* (yarn)

ORGANSKO HEMIJSKA INDUSTRIJA SKOPJE (OHIS)
Acrylic — Skopje, Macedonia *Makrolan, Malon* (staple)

TEKSTILNA INDUSTRIYA "ZELE VELJKOVIC"
Nylon 6 — Leskovac" (yarn & staple)

VARAZDINSKI TEKSTILNI KOMBINAT (VARTEKS)
Polyester — Varazdin (staple)

VISKOZA
Rayon — Loznica, Serbia (ind & reg yarn & staple)

OLEFIN FIBER

HEMIJASKA INDUSTRIJA U OSNIVANJU Belgrade (P staple)

GLASS FIBER

GOSTIVAR STAKLARA Staklara (roving & mat)

WORLDWIDE MANUFACTURED FIBER PRODUCER AFFILIATIONS & PERCENTAGE OF CAPITAL OWNERSHIP

Licensing and royalty agreements are not taken into account. The ownership of companies, other than manufactured fiber producers, is not listed; e.g., weaving mills, chemical producers, etc.

For each country, the percentage following the first-named producer is the portion owned by the captioned company; the remainder of the entry shows other ownership. For example, Akzo N.V. owns 40% of Fibras Quimicas and Alfa-Group owns 60%.

AKZO N.V. (NETHERLANDS)

Brazil	Companhia Bahiana de Fibras 36%, others 64%
	Polyenka 51%, others 49%
Colombia	Enka de Colombia 49%, others 51%
Ecuador	Enkador 49%, others 51%
Germany, Fed. Rep.	Enka 97%, public 3%
India	Century Enka 40%, others 60%
Mexico	Fibras Quimicas 40%, Alfa-Group 60%
Netherlands	Enka 100%
	Silenka 33.33%, PPG Industries 33.33%, others 33.33%
Spain	La Seda 58%, others 42%

AMERICAN CYANAMID COMPANY (U.S.A.)

U.S.A.	Fibers Division 100%

AMOCO CHEMICALS CORPORATION (U.S.A.)

Australia	Amoco Fabrics & Fibers Co. 100%
Brazil	Amoco Fabrics & Fibers Co. 100%
Canada	Amoco Fabrics & Fibers Co. 100%
Germany, Fed. Rep.	Amoco Fabrics & Fibers Co. 100%
U.K.	Amoco Fabrics & Fibers Co. 100%
U.S.A.	Amoco Fabrics & Fibers Co. 100%

ASAHI CHEMICAL INDUSTRY CO. LTD. (JAPAN)

India	Baroda Rayon Corp. 1%, local interests 89%, others 10%
Indonesia	P.T. Indonesia Asahi Chemical 51%, others 19%, local interests 30%
Ireland	Asahi Synthetic Fibres (Ireland) 85%, others 15%
Japan	Asahi Chemical 100%
Korea, Rep. of	Tong Yang Polyester 50%, Tong Yang Nylon 50%

BASF CORPORATION

BASF Corporation owns 100% of BASF Corporation Fibers Division and owns 100% of BASF Fibres Inc.

BAYER A.G. (WEST GERMANY)

Belgium	Bayer Antwerpen N.V. 100%
Germany, Fed. Rep.	Bayer A.G. 100%
	Faserwerke Lingen G.m.b.H. 100%
Peru	Bayer Industrial S.A. 60%

COURTAULDS, PLC (U.K.)

France	Courtaulds S.A. 100%
Italy	Novaceta S.p.A. 50%, SNIA 50%
Spain	Courtaulds Fibres S.A. 100%
	INACSA 12%, public 88%
U.K.	Courtaulds Fibres Ltd. 100%
U.S.A./Canada	Courtaulds Fibers Inc. 100%

E. I. DU PONT DE NEMOURS & COMPANY (U.S.A.)

Argentina	Ducilo 82%, Bunge & Born 18%
Brazil	Du Pont do Brasil 100%
Canada	Du Pont Canada 75%, public 25%
Germany, Fed. Rep.	Du Pont de Nemours (Deutschland) 100%
Japan	Toray-Dupont 50%, Toray Industries 50%
Luxembourg	Du Pont Fibres 100%
Mexico	Nylon de Mexico 40%, Alfa-Group 51%, public 9%
Netherlands	Du Pont de Nemours (Nederland) 100%
U.K.	Du Pont (U.K.) 100%
U.S.A.	Textile Fibers Department 100%
	Polymer Products Department 100%

ENICHEM FIBRE S.p.A. (ITALY)

Italy	Carpol S.p.A. 100%
	Terbond S.p.A. 100%

FIRESTONE TIRE & RUBBER COMPANY (U.S.A.)

Canada	Firestone Textiles Co. 100%
U.S.A.	Firestone Fibers & Textiles 100%

HARBOUR GROUP LTD. (U.S.A.)

U.K.	Synthetic Industries (Ireland) PLC 100%
U.S.A.	Fibron Corp. of Tennessee 100%
	Synthetic Industries, Inc. 100%
	Synthetic Industries (Texas), Inc. 100%

HERCULES INCORPORATED (U.S.A.)

Italy	Moplefan 50%, Montedison 50%
U.S.A.	Hercules 100%

HOECHST A.G. (WEST GERMANY)

Austria	Austria Faserwerke, Hoechst Austria 51%, Lenzing 49%
Belgium	Hoechst Celanese 100%
Brazil	Hoechst Do Brasil Quimica e Farmaceutica S.A. 100%
Canada	Celanese Canada Inc. 56%, public 44%
Germany, Fed. Rep.	Hoechst A.G. 100%
	Zehlendorf 97%, others 3%
Mexico	Celanese Mexicana, S.A. 40%, public 60%
Portugal	Hoechst Portuguesa S.A.R.L. 100%
South Africa	Hoechst South Africa 100%
U.K.	Hoechst Fibre Industries 100%
U.S.A.	Hoechst Celanese Corporation 100%

IMPERIAL CHEMICAL INDUSTRIES LIMITED (U.K.)

Germany, Fed. Rep.	ICI Europa Fibres G.m.b.H. 100%
India	Chemicals & Fibres of India Ltd. 55%
Pakistan	ICI Pakistan Manufacturers 70%
Portugal	Finicisa-Fibras 50%, Francisco Fino Ltd. 50%
South Africa	S.A. Nylon Spinners (through AECI Ltd.) 38%
Spain	N[illegible]l S.A. 100%
U.K.	ICI Fibres 100%

KURARAY CO., LTD. (JAPAN)

Japan	Kuraray 100%

MITSUBISHI RAYON (JAPAN)

Japan	Mitsubishi Rayon Co. Ltd. 100%
Portugal	FISIPE 4%, Mitsubishi Corp. 9%, Quimigal 87%
Taiwan	Tong Hwa 19%, Mitsubishi Corp. 12%, others 69%

MONTEFIBRE S.p.A. (ITALY)

Italy	Industrie Tessili Vercelli S.p.A. 100%, Societa Industriale Cremonese S.p.A. 50%, others 50%
Spain	Montefibre Hispania S.A. 100%

OWENS-CORNING FIBERGLAS CORPORATION (U.S.A.)

Belgium	Owens-Corning Fiberglas Europe 100%
Brazil	OCFIBRAS 100%
Canada	Fiberglas Canada 49%, Duplate Canada 49%, local interests 2%
France	Owens-Corning Fiberglas Europe 100%
Japan	Asahi Fiber Glass 28%, Asahi Glass Co., Ltd. 72%
Mexico	Vitro-Fibras 40%, Vitro Group 60%
Norway	Owens-Corning Fiberglas Europe 70%, Elkem-Spigerverket 30%
Spain	Owens-Corning Fiberglas Europe 100%
Sweden	Owens-Corning Fiberglas Europe 100%
U.S.A.	Owens-Corning Fiberglas 100%

PPG INDUSTRIES (U.S.A.)

Netherlands	Silenka 33.33%, Akzo N.V. 33.33%, NOM 33.33%
U.K.	PPG Glass Fibres Ltd. 100%
U.S.A.	Fiber Glass Products 100%
Venezuela	VFG Sudamtex 49%, Sudamtex 51%

PILKINGTON BROTHERS (U.K.)

Argentina	VASA 99.7%, Glaverbel/Boussois/local interests 0.3%
India	Fibreglass Pilkington 50%, plus 1 share, Indian interests 50%, less 1 share
South Africa	Fibreglass South Africa 24.5%, Owens-Corning Fiberglas (U.S.A.) 24.5%, Plate Glass & Shatterprufe Industries Ltd. 51%
U.K.	Fibreglass PLC 100%

RHONE-POULENC S.A. (FRANCE)

Argentina	Rhodia Argentina Quimica e Têxtil 100%
Brazil	Rhodia S.A. 100%, Rhodia Nordeste 99%
France	Rhône-Poulenc-Textile 99.9%, Rhône-Poulenc-Fibres 100%, Cellatex 100%, Rhovyl 100%
Germany, Fed. Rep.	Rhodia A.G. 100%
Spain	SAFA 90%
Switzerland	Viscosuisse (through Holva AG) 100%

SAINT-GOBAIN (FRANCE)

France	Saint-Gobain Industries 100%
Germany, Fed. Rep.	Gevetex-Textilglas 100%
Italy	Vetrotex Italia 100%
Spain	Cristaleria Espanola S.A. 69%
U.S.A.	CertainTeed Corp. 55%, others 45%

SNIA FIBRE (ITALY)

France	Ets. Nysam 100%
Italy	Novaceta 50%, Courtaulds (U.K.) 50%, Nuova Raion Italia S.p.A. 34.7%, others 65.3%

TEIJIN LTD. (JAPAN)

Indonesia	P.T. Tifico 65.8%, Toyo Menka 16.5%, local interests 17.7%
Japan	Teijin 100%, Teijin Acetate 100%
Korea, Rep. of	Sunkyung Fibres 2.9%, local interests 97.1%
Thailand	Teijin Polyester 45%, local interests 55%

TORAY INDUSTRIES, INC. (JAPAN)

Indonesia	P.T. Indonesia Toray Synthetics 59%, others 41%
Japan	Toray Industries 100%, Toray-Monofilament 100%, Toray-DuPont 50%, DuPont 50%
Korea, Rep. of	Cheil Synthetic Textiles 22.8%, others 77.2%, Kolon Industries 19.3%, others 80.7%
Malaysia	Penfibre SDN. Berhad 100%
Thailand	Toray Nylon Thai 30%, others 70%

WELLMAN, INC. (U.S.A.)

Ireland	Wellman International 100%
U.S.A.	Man-Made Fiber Division 100%

TABLE 10:
SELECTED U.S. MANUFACTURED FIBER IMPORTS BY COUNTRY OF ORIGIN
THOUSAND POUNDS

ITEMS & COUNTRY	1989 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR TO DATE 1989	1988
ARTIFICIAL (CELLULOSIC) YARN, MONOFIL & STRIPS														
AUSTRIA	0	0	6	1									7	
BRAZIL	53	110	55	0									218	
CANADA	745	619	686	613									2663	
GERMANY, FED. REP. OF	784	515	697	452									2448	
JAPAN	55	121	122	185									483	
MEXICO	156	99	171	45									471	
NETHERLANDS	61	239	261	173									734	
UNITED KINGDOM	75	68	113	135									391	
ALL OTHER COUNTRIES [a]	187	68	88	224									567	
TOTAL ARTIFICIAL YARN	**2116**	**1839**	**2199**	**1828**									**7982**	**5163**
ARTIFICIAL (CELLULOSIC) STAPLE+TOW+TOPS														
AUSTRIA	323	422	377	226									1348	
CANADA	4757	1990	4093	3462									14302	
GERMANY, FED. REP. OF	68	67	95	116									346	
JAPAN	150	521	422	263									1356	
UNITED KINGDOM	265	225	1	47									538	
ALL OTHER COUNTRIES [b]	414	266	656	306									1642	
TOTAL ARTIFICIAL STAPLE+TOW	**5977**	**3491**	**5644**	**4420**									**19532**	**4292**
SYNTHETIC (NONCELLULOSIC) YARN, MONOFIL & STRIPS														
BELGIUM	0	56	129	171									356	
BRAZIL	124	137	365	107									732	
CANADA	3795	3098	3138	2532									12563	
COSTA RICA	252	487	591	433									1763	
ECUADOR	91	26	144	0									261	
FRANCE	1180	1151	1079	1159									4569	
GERMANY, FED. REP. OF	2281	2204	2641	2516									9642	
IRELAND	121	114	240	77									552	
ISRAEL	299	217	172	149									837	
ITALY	1094	323	873	883									3173	
JAPAN	893	1251	1065	966									4175	
KOREA, REP. OF	15	49	7	81									152	
MEXICO	1447	2233	2385	1857									7922	
NETHERLANDS	82	193	267	338									880	
SINGAPORE	0	25	0	33									58	
TAIWAN	50	175	650	1296									2171	
THAILAND	65	64	69	67									265	
UNITED KINGDOM	1539	1357	1492	1677									6065	
ALL OTHER COUNTRIES [c]	36	195	296	317									844	
TOTAL SYNTHETIC YARN	**13364**	**13355**	**15603**	**14659**									**56981**	**39382**
SYNTHETIC (NONCELLULOSIC) STAPLE+TOW+TOPS														
AUSTRIA	0	3	9	13									25	
AUSTRALIA	31	160	1	82									274	
BELGIUM	47	99	60	56									262	
BRAZIL	0	24	0	0									24	
CANADA	1413	737	1481	1489									5120	
FRANCE	230	304	253	405									1192	
GERMANY, FED. REP. OF	1985	1758	1318	1293									6354	
INDIA	0	0	3772	3400									7172	
IRELAND	280	480	305	348									1413	
ITALY	482	394	206	46									1128	
JAPAN	1773	1757	2303	2770									8603	
KOREA, REP. OF	2297	3387	3933	4165									13782	
MEXICO	1049	372	420	1016									2857	
NETHERLANDS	31	103	99	81									314	
SWITZERLAND	146	165	134	166									611	
TAIWAN	262	235	215	808									1520	
UNITED KINGDOM	2318	2304	1643	2107									8372	
ALL OTHER COUNTRIES [d]	28	29	223	95									375	
TOTAL SYNTHETIC STAPLE+TOW	**12372**	**12311**	**16375**	**18340**									**59398**	**59662**

a. Ireland 211, Korea, Rep. of 144, Chile 110, Italy 45, Norway 32, Singapore 23, France 1, Taiwan 1.

b. China, PRC 473, Australia 217, Korea, Rep. of 171, Taiwan 144, Germany, Dem. Rep. 138, Switzerland 112, Poland 110, Romania 98, France 84, Sweden 43, Italy 31, India 18, Mexico 1.

c. Portugal 304, Argentina 86, Austria 74, China, PRC 57, Turkey 51, Australia 49, Egypt 44, Spain 34, Switzerland 33, El Salvador 31, Morocco 26, Chile 22, Peru 21, Hong Kong 7, Greece 2, Sweden 2, Denmark 1.

d. Spain 225, Israel 85, Germany, Dem. Rep. 42, Turkey 18, Hong Kong 3, China, PRC 2.

Effective January 1,1989 the U.S. Manufactured Imports for Consumption by Country of Origin are based on the new Harmonized System (HS). On pages 73 through 79 of the ***Fiber Organon***, April 1989 issue, we present the Harmonized Tariff Schedule of the United States covering cellulosic (artificial) and noncellulosic (synthetic) fibers, Annotated for Statistical Reporting Purposes. **Data for 1989 is not comparable to prior years.**

Selected U.S. Manufactured Imports for Consumption by Country of Origin for 1988 are published in the ***Textile Organon***, February 1989 issue, page 31.

TABLE 11:
U.S. MANUFACTURED FIBER IMPORTS
THOUSAND POUNDS

ITEM	1989 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR TO DATE 1989	1988
ARTIFICIAL (CELLULOSIC) FIBER														
FILAMENT YARN														
HIGH TENACITY	114	266	408	205									993	
TEXTURED	180	1	0	24									205	
OTHER	1726	1532	1671	1449									6378	
MONOFILAMENTS & STRIPS	96	40	120	150									406	
SUBTOTAL ABOVE	**2116**	**1839**	**2199**	**1828**									**7982**	**5163**
STAPLE	5924	3481	5624	4403									19432	
TOW	47	0	0	7									54	
TOPS	6	10	20	10									45	
SUBTOTAL ABOVE	**5977**	**3491**	**5644**	**4420**									**19532**	**4292**
WASTE	**18**	**122**	**47**	**213**									**400**	**5**
SYNTHETIC (NONCELLULOSIC) FIBERS														
FILAMENT YARN														
NYLON														
HIGH TENACITY	1037	1093	1506	1578									5214	
TEXTURED														
UP TO 450 DENIER	385	217	359	285									1246	
OVER 450 DENIER	1311	1052	1428	1294									5085	
OTHER	3820	3306	3786	3845									14757	
MONOFILAMENTS & STRIPS	72	159	58	113									402	
SUBTOTAL ABOVE	**6625**	**5827**	**7137**	**7115**									**26704**	**13164**
POLYESTER														
HIGH TENACITY	957	880	909	488									3234	
TEXTURED	883	1673	1738	1766									6060	
POY	0	40	642	1088									1770	
OTHER	1152	1481	1719	1740									6092	
MONOFILAMENTS & STRIPS	65	80	34	55									234	
SUBTOTAL ABOVE	**3057**	**4154**	**5042**	**5137**									**17390**	**11436**
OTHER SYNTHETIC FILAMENT														
TEXTURED	2057	1685	1552	1054									6348	
OTHER	1478	1389	1564	1029									5460	
MONOFILAMENTS & STRIPS	147	230	308	324									1009	
SUBTOTAL ABOVE	**3682**	**3304**	**3038**	**2407**									**12817**	**14782**
STAPLE														
NYLON	1726	1896	1845	1592									7059	
POLYESTER	5584	5594	10047	10627									31852	
ACRYLIC	1934	1028	1576	1518									6056	
POLYPROPYLENE	44	55	197	351									647	
OTHER	172	1040	651	740									2603	
TOW														
NYLON	237	433	257	504									1431	
POLYESTER	47	78	131	49									305	
ACRYLIC	2023	1709	1127	2522									7381	
OTHER	117	120	146	0									383	
TOPS	488	358	398	437									1681	
SUBTOTAL ABOVE	**12372**	**12311**	**16375**	**18340**									**59398**	**59662**
WASTE														
NYLON	1971	1804	1754	2087									7616	
POLYESTER	969	340	730	1029									3098	
OTHER	396	725	477	486									2084	
TOTAL MANUFACTURED FIBERS ABOVE	37213	33917	42829	43062									157021	123391
OTHER MFRD. FIBER YARN & THREAD														
SEWING THREAD														
FILAMENT	229	84	46	26									385	
SPUN YARN	492	396	370	287									1545	
SPUN YARNS														
SYNTHETIC	517	686	517	258									1978	
ARTIFICIAL	0	0	0	0									0	
PUT UP FOR RETAIL SALE	71	50	27	37									185	
GRAND TOTAL ABOVE	**38522**	**35133**	**43789**	**43670**									**161114**	**154538**

SOURCE: U.S. Census Bureau Report IM145X

Effective January 1,1989 the U.S. imports are based on the new Harmonized System (HS). On pages 73 through 79 of the ***Fiber Organon***, April 1989 issue, we present the Harmonized Tariff Schedule of the United States covering cellulosic (artificial) and noncellulosic (synthetic) fibers, Annotated for Statistical Reporting Purposes. **Data for 1989 is not comparable to prior years.**

U.S. Monthly Imports of Manufactured Fibers for 1988, are published in the ***Textile Organon***, February 1989 issue, on page 32.

TABLE 12:
U.S. MANUFACTURED FIBER EXPORTS
THOUSAND POUNDS

ITEM	1989 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR TO DATE 1989	1988
ARTIFICIAL (CELLULOSIC) FIBER														
FILAMENT YARN														
HIGH TENACITY	9	13	45	26									93	
TEXTURED	463	17	29	1									510	
OTHER	694	63	18	60									835	
MONOFILAMENTS & STRIPS	90	0	7	93									190	
SUBTOTAL ABOVE	**1236**	**93**	**99**	**180**									**1628**	**3705**
STAPLE	2827	1786	1325	920									6858	
TOPS	94	0	8	129									231	
SUBTOTAL ABOVE	**2921**	**1786**	**1333**	**1049**									**7089**	**6889**
WASTE	**1303**	**559**	**1587**	**1116**									**4565**	**678**
SYNTHETIC (NONCELLULOSIC) FIBERS														
FILAMENT YARN														
NYLON														
HIGH TENACITY	9331	9410	7884	16614									43239	
TEXTURED														
UP TO 450 DENIER	522	586	719	666									2493	
OVER 450 DENIER	4706	5051	5459	4430									19646	
OTHER	2038	2103	2133	2188									8462	
MONOFILAMENTS & STRIPS	239	258	187	131									815	
SUBTOTAL ABOVE	**16836**	**17408**	**16382**	**24029**									**74655**	**54583**
POLYESTER														
HIGH TENACITY	3031	3122	2773	3282									12208	
TEXTURED	3651	3677	2385	2939									12652	
POY	939	1250	2204	1446									5839	
OTHER	1007	584	829	983									3403	
MONOFILAMENTS & STRIPS	208	213	203	132									756	
SUBTOTAL ABOVE	**8836**	**8846**	**8394**	**8782**									**34858**	**27167**
OTHER SYNTHETIC FILAMENT														
TEXTURED	1033	457	872	903									3265	
OTHER	1342	1471	1735	1730									6278	
MONOFILAMENTS & STRIPS	486	421	771	1317									2995	
SUBTOTAL ABOVE	**2861**	**2349**	**3378**	**3950**									**12538**	**15570**
STAPLE														
NYLON	2605	3265	3262	2629									11761	
POLYESTER	14048	10762	12940	12923									50673	
ACRYLIC	3326	5674	6643	6369									22539	
POLYPROPYLENE	1336	1569	1129	2264									6298	
OTHER	836	2036	1489	2562									6923	
TOW														
NYLON	31	50	50	108									239	
POLYESTER	37	564	472	634									1707	
ACRYLIC	1037	1761	2185	3302									8285	
OTHER	161	16	34	503									714	
TOPS	847	964	1224	2191									5226	
SUBTOTAL ABOVE	**24264**	**26661**	**29428**	**34012**									**114365**	**138187**
WASTE														
NYLON	2127	2118	2159	2883									9287	
POLYESTER	4369	3980	3189	5535									17073	
OTHER	5113	6957	8080	6731									26881	
TOTAL MANUFACTURED FIBERS ABOVE	**69886**	**70757**	**74029**	**88267**									**302939**	**287685**
OTHER MFRD. FIBER YARN & THREAD														
SEWING THREAD														
FILAMENT	13	51	43	74									181	
SPUN YARN	0	0	0	0									0	
SPUN YARNS														
SYNTHETIC	732	659	1152	1172									4015	
ARTIFICIAL	0	0	0	0									0	
PUT UP FOR RETAIL SALE	606	740	923	580									2849	
GRAND TOTAL ABOVE	**71237**	**72507**	**76147**	**90093**									**309984**	

SOURCE: U.S. Census Bureau Report EM522

Effective January 1,1989 the U.S. Exports are based on the new Harmonized System (HS). On pages 73 through 79 of the ***Fiber Organon***, April 1989 issue, we present the Harmonized Tariff Schedule of the United States covering cellulosic (artificial) and noncellulosic (synthetic) fibers, Annotated for Statistical Reporting Purposes. **Data for 1989 is not comparable to prior years.**

U.S. Monthly Exports of Manufactured Fibers for 1988, are published in the ***Textile Organon***, February 1989 issue, on page 33.

TABLE 13:
FILAMENT YARN DOMESTIC SHIPMENTS [a]

MILLION POUNDS

ITEM		ANNUAL DATA				QUARTERLY DATA 1988				QUARTERLY DATA 1989			
		1985	1986	1987	1988	1ST Q	2ND Q	3RD Q	4TH Q	1ST Q	2ND Q	3RD Q	4TH Q
(C) CELLULOSIC YARN		*(N) NYLON*				*(P) POLYESTER*				*(O) OLEFIN*			
HOSIERY [b]	N	98.1	95.1	93.2	100.3	23.1	24.9	23.9	28.4	j			
OTHER CIRCULAR KNIT [c]	N	12.9	21.3	25.3	26.4	7.1	6.4	6.7	6.2	32.5			
	P	151.2	150.3	102.8	119.5	25.6	28.2	27.9	37.8	40.4			
	C	2.6	2.0	1.1	0.6	0.2	0.2	0.1	0.1	0.2			
FLAT KNIT	C	53.0	47.8	27.9	24.3	5.7	7.7	5.8	5.1	6.0			
	N	143.6	133.8	131.4	133.4	31.2	33.1	33.2	35.9	36.1			
	P	160.8	167.1	162.5	162.1	39.2	43.0	38.6	41.3	46.0			
CARPET FACE	N	815.4	881.4	916.0	938.3	228.2	233.8	241.2	235.1	225.1			
	O	202.1	215.7	244.5	266.6	65.1	67.9	67.2	66.4	69.0			
CARPET BACKING [d]	O	354.6	404.1	425.3	427.0	107.9	113.0	102.1	104.0	105.4			
OTHER BROAD WOVEN [e]	C	111.3	126.3	122.8	141.9	31.0	35.2	36.0	39.7	35.6			
	N	71.4	76.2	79.4	78.3	20.3	17.6	19.8	20.6	21.0			
	P	420.1	344.4	379.4	391.3	89.8	95.5	94.0	112.0	100.7			
	O	225.7	271.5	317.7	336.6	84.9	83.7	82.3	85.7	87.6			
NARROW WOVEN [f]	C	1.5	2.0	2.2	4.4	1.5	1.1	0.9	0.9	1.8			
	N	31.1	33.9	42.1	42.0	11.1	11.1	9.9	9.9	9.6			
	P	40.0	44.0	66.2	81.0	15.2	18.9	17.8	29.1	18.9			
	O	15.2	17.5	17.7	19.0	4.7	4.8	4.8	4.7	4.4			
TIRES, INCL. CHAFER [g]	N	146.0	134.2	143.0	132.2	34.5	33.1	31.2	33.4	34.3			
	P	155.5	159.3	162.8	171.8	41.3	44.2	43.4	42.9	41.6			
OTHER RUBBER INDUSTRY [c,g]	N	15.3	15.2	16.4	20.4	5.5	4.7	4.9	5.3	4.5			
	P	31.2	27.2	34.5	25.2	6.7	6.2	6.2	6.1	6.3			
ROPE, CORDAGE & FISHLINE	N	35.3	36.4	37.9	36.4	9.7	9.7	8.2	8.8	8.8			
	P	13.8	13.0	13.4	12.5	3.7	3.1	2.4	3.3	3.2			
	O	108.2	106.3	106.7	105.0	27.9	25.5	23.6	28.0	27.0			
ALL OTHER [h]	C	18.7	14.0	12.8	11.4	3.0	3.1	3.0	2.3	2.4			
	N	48.3	52.1	69.6	64.7	17.1	21.0	12.1	14.5	16.0			
	P	231.7	187.1	191.8	194.0	45.2	52.8	47.9	48.1	35.0			
	O	31.8	34.1	23.6	29.9	7.8	7.6	7.7	6.8	8.3			
TOTAL ABOVE	C	**187.1**	**192.1**	**166.8**	**182.6**	**41.4**	**47.3**	**45.8**	**48.1**	**46.0**			
	N	**1417.4**	**1479.6**	**1554.3**	**1572.4**	**387.8**	**395.4**	**391.1**	**398.1**	**387.9**			
	P	**1204.3**	**1092.4**	**1113.4**	**1157.4**	**266.7**	**291.9**	**278.2**	**320.6**	**292.1**			
	O	**937.6**	**1049.2**	**1135.5**	**1184.1**	**298.3**	**302.5**	**287.7**	**295.6**	**301.7**			
TOTAL DOMESTIC		**3746.4**	**3813.3**	**3970.0**	**4096.5**	**994.2**	**1037.1**	**1002.8**	**1062.4**	**1027.7**			
ALSO DIVIDED AS													
APPAREL		*1064.8*	*949.4*	*932.3*	*941.2*	*223.0*	*237.0*	*226.0*	*255.2*	*253.7*			
HOME FURNISHINGS		*1624.9*	*1746.8*	*1836.3*	*1902.6*	*463.0*	*485.0*	*475.1*	*479.5*	*468.4*			
INDUSTRIAL		*1056.7*	*1117.1*	*1201.4*	*1252.7*	*308.2*	*315.1*	*301.7*	*327.7*	*305.6*			
SHIPMENTS OF FEED & PRODUCER-TEXTURED YARN (NONCARPET) [i]													
NYLON		114.9	115.8	NA	NA	NA	NA	NA	NA	NA			
POLYESTER		776.3	634.6	626.3	649.9	146.7	159.2	153.8	190.2	164.5			
OLEFIN		22.3	22.9	26.6	24.4	6.4	6.4	5.5	6.1	6.9			

NA No longer available.

a. Filament yarn plus monofilament shipments by primary trade or end use; olefin includes spunbonded polypropylene but does not include spunbonded polyethylene.

b. Small quantities of polyester and cellulosic yarn are included in All Other.

c. Small quantities of olefin are included in All Other.

d. Small quantities of nylon and polyester are included in All Other.

e. Other Broad Woven except carpets, tire fabric, flat belting, etc.

f. Narrow Woven includes apparel ribbons and braids, auto seat belts and/or furniture webbing.

g. Cellulosic yarn quantities included in All Other.

h. All Other includes sewing thread and other industrial applications. The olefin quantities include sliver knit backing. Also includes indirect exports.

i. These quantities are included in the Total Domestic area above.

j. Nylon quantities are included in Other Circular Knit.

TABLE 14:
STAPLE+TOW DOMESTIC SHIPMENTS

MILLION POUNDS

ITEM		ANNUAL DATA				QUARTERLY DATA							
						1988				1989			
		1985	1986	1987	1988	1ST Q	2ND Q	3RD Q	4TH Q	1ST Q	2ND Q	3RD Q	4TH Q
(R) RAYON	*(N) NYLON*	*(A) ACRYLIC+MODACRYLIC*				*(P) POLYESTER*				*(O) OLEFIN*			
HOSIERY SWEATERS & CRAFT YARNS[a]	A	197.2	228.8	192.4	183.2	47.5	46.7	46.4	42.6	48.5			
	NPR	5.5	5.1	3.5	2.7	0.8	0.7	0.6	0.6	0.9			
PILE FABRICS[b]	A	24.5	23.2	20.8	21.3	5.0	5.7	5.6	5.0	5.1			
	P	14.9	15.0	19.7	14.7	3.9	3.6	3.3	3.9	3.7			
OTHER CIRCULAR KNIT + FLAT KNIT[c]	R	5.5	4.7	3.7	2.5	0.5	0.3	0.8	0.9	0.8			
	A	139.1	196.3	185.1	139.0	37.8	39.6	34.2	27.4	35.7			
	P	295.5	367.8	453.3	470.0	108.4	112.6	108.5	140.5	127.8			
BLANKETS[b]	A	30.2	26.7	25.7	25.1	6.4	5.6	7.9	5.2	7.4			
	P	6.2	3.7	9.2	6.9	1.8	1.4	1.6	2.1	2.3			
OTHER BROAD WOVEN	R	174.9	218.0	230.7	243.0	58.7	60.5	63.5	60.3	[illegible]			
	N	37.4	37.0	38.7	35.2	8.7	8.0	8.4	10.1	[illegible]2			
	A	38.2	35.3	41.7	39.3	10.4	9.6	8.9	10.4	12.7			
	P	864.9	885.6	839.2	863.5	210.7	212.9	205.7	234.2	200.8			
	O	26.9	18.0	20.2	17.1	4.6	3.8	3.4	5.3	5.2			
CARPET FACE YARNS[f]	R	0.5	0.4	+	0.4	0.2	0.1	0	0.1	0.1			
	N	773.9	837.8	905.1	f	f	f	f	f	f			
	P	126.8	145.0	209.0	261.2	66.1	69.0	62.3	63.8	60.2			
	O	107.4	117.2	116.2	138.2	30.3	35.4	34.2	38.3	38.5			
FIBERFILL[d]	P	281.1	294.9	348.6	357.2	85.3	84.9	92.9	94.1	90.3			
FLOCK	NP	5.3	5.9	5.5	6.9	1.6	1.6	1.6	2.1	1.8			
	R	1.8	1.8	0.9	0.1	+	+	+	0.1	0			
NONWOVENS[e]	R	113.5	125.4	124.4	122.3	35.4	36.0	26.7	24.2	27.0			
	N	2.5	2.1	1.9	2.1	0.4	0.5	0.6	0.6	0.7			
	P	162.5	175.4	204.2	244.1	59.7	55.9	59.0	69.5	68.0			
	[g]VINYON+O	135.8	166.2	198.0	180.9	46.0	46.9	45.4	42.6	46.0			
ALL OTHER	R	25.9	20.8	22.7	17.2	6.9	5.0	2.9	2.4	2.7			
	N	11.2	11.9	14.8	901.4	229.0	214.0	231.1	227.3	231.4			
	A	29.5	20.9	13.6	13.2	1.9	2.1	4.3	4.9	3.6			
	P	116.9	108.3	115.0	91.3	21.5	31.4	17.3	21.1	21.4			
	[g]VINYON+O	9.6	11.3	6.7	8.0	2.9	1.5	1.8	1.8	1.9			
TOTAL ABOVE	**R**	**323.7**	**373.0**	**383.1**	**386.0**	**101.9**	**102.0**	**94.0**	**88.1**	**99.7**			
	N	**830.3**	**894.9**	**966.0**	**944.9**	**239.4**	**223.9**	**241.6**	**240.0**	**242.0**			
	A	**458.7**	**531.2**	**479.3**	**421.1**	**109.0**	**109.3**	**107.3**	**95.5**	**113.0**			
	P	**1872.7**	**1998.6**	**2201.0**	**2311.8**	**558.3**	**572.5**	**551.2**	**629.8**	**575.4**			
	[g]VINYON+O	**279.7**	**312.7**	**341.1**	**344.2**	**83.8**	**87.6**	**84.8**	**88.0**	**91.6**			
TOTAL DOMESTIC		**3765.1**	**4110.4**	**4370.5**	**4408.0**	**1092.4**	**1095.3**	**1078.9**	**1141.4**	**1121.7**			
ALSO DIVIDED AS													
APPAREL		*1255.0*	*1489.3*	*1479.9*	*1421.6*	*352.6*	*356.4*	*340.5*	*372.1*	*361.9*			
HOME FURNISHINGS		*1536.9*	*1625.8*	*1755.8*	*1827.5*	*451.5*	*445.9*	*455.5*	*474.6*	*467.3*			
INDUSTRIAL		*973.2*	*995.3*	*1134.8*	*1158.9*	*288.3*	*293.0*	*282.9*	*294.7*	*292.5*			

a. Olefin quantities are included in All Other
b. Rayon and nylon quantities are included in All Other
c. Nylon quantities are included in All Other
d. Rayon, acrylic and nylon quantities are included in All Other
e. Wet & dry laid and needled batts only
f. Acrylic and nylon quantities are included in All Other
g. 1987-1989 data exclude Vinyon

TABLE 15:
SELECTED U.S. MONTHLY FIBER DATA

MILLION POUNDS

ITEM	1989 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR TO DATE[a] 1989	1988
MANUFACTURED FIBER TOTAL SHIPMENTS[b,c]														
ARTIFICIAL (CELLULOSIC)														
YARN	17.3	17.0	18.4	21.5	18.3								92.5	87.7
RAYON STAPLE	34.5	32.1	36.5	32.1	34.7								169.9	178.9
TOTAL ARTIFICIAL (CELLULOSIC)	51.8	49.1	54.9	53.6	53.0								262.4	266.6
SYNTHETIC (NONCELLULOSIC)														
YARN+MONOFILAMENTS														
NYLON - INDUSTRIAL[d]	31.3	30.5	32.5	32.3	28.9								155.5	157.4
- CARPET	74.9	77.2	82.0	77.5	86.1								397.7	400.6
- TEXTILE[f]	33.9	33.2	35.0	34.6	33.8								170.5	158.8
POLYESTER - INDUSTRIAL[d]	28.6	29.7	30.9	32.2	30.4								151.8	147.2
- TEXTILE[f]	73.2	71.2	74.4	78.2	76.3								373.3	345.5
OLEFIN[e]	103.2	102.2	101.5	97.7	101.7								506.3	506.7
TOTAL YARN	345.1	344.0	356.3	352.5	357.2								1755.1	1716.2
STAPLE+TOW+FIBERFILL														
NYLON	82.3	78.4	88.8	76.4	81.3								407.2	392.8
ACRYLIC+MODACRYLIC	41.7	46.2	48.6	49.2	51.7								237.4	277.4
POLYESTER	205.8	192.1	212.4	214.3	206.8								1031.4	994.4
OLEFIN	31.0	31.6	32.0	31.4	31.2								157.2	150.4
TOTAL STAPLE	360.8	348.3	381.8	371.3	371.0								1833.2	1815.0
TOTAL SYNTHETIC (NONCELLULOSIC)	705.9	692.3	738.1	723.8	728.2								3588.3	3531.2
TOTAL MANUFACTURED FIBER	757.7	741.4	793.0	777.4	781.2								3850.7	3797.8
MANUFACTURED FIBER END-OF-MONTH STOCK														
ARTIFICIAL (CELLULOSIC)														
YARN	11.7	10.9	11.3	10.4	9.7								9.7	12.8
RAYON STAPLE	13.0	13.2	11.7	12.5	13.4								13.4	16.5
TOTAL ARTIFICIAL (CELLULOSIC)	24.7	24.1	23.0	22.9	23.1								23.1	29.3
SYNTHETIC (NONCELLULOSIC)														
YARN+MONOFILAMENTS														
NYLON - INDUSTRIAL[d]	24.4	24.7	22.4	22.9	24.2								24.2	25.2
- CARPET	63.5	63.2	62.8	68.7	64.0								64.0	70.3
- TEXTILE[f]	47.1	48.3	46.4	47.0	47.4								47.4	51.1
POLYESTER - INDUSTRIAL[d]	35.0	31.4	30.6	31.6	30.9								30.9	30.5
- TEXTILE[f]	73.5	76.9	81.8	85.1	85.0								85.0	79.7
OLEFIN[e]	53.1	53.8	55.2	55.3	55.0								55.0	54.6
TOTAL YARN	296.6	298.3	299.2	310.6	306.5								306.5	311.4
STAPLE+TOW+FIBERFILL														
NYLON	51.8	52.9	50.9	57.5	57.5								57.5	60.4
ACRYLIC+MODACRYLIC	70.5	68.3	69.0	67.3	65.2								65.2	63.7
POLYESTER	163.5	163.8	158.5	164.4	176.2								176.2	167.5
OLEFIN	31.0	31.3	32.8	34.3	35.2								35.2	37.8
TOTAL STAPLE	316.8	316.3	311.2	323.5	334.1								334.1	329.4
TOTAL SYNTHETIC (NONCELLULOSIC)	513.4	614.6	610.4	634.1	640.6								640.6	640.8
TOTAL MANUFACTURED FIBER	638.1	638.7	633.4	657.0	663.7								663.7	670.1
WOOL & COTTON CONSUMPTION														
APPAREL CLASS WOOL	12.1	12.8	14.1	12.0									51.0	50.0
CARPET CLASS WOOL	0.8	1.4	1.5	1.6									5.3	5.9
TOTAL RAW WOOL	12.9	14.2	15.6	13.6									56.3	55.9
RAW COTTON	289.5	301.0	339.2	305.7									1235.4	1228.7

a. "Year to date" totals for stock, are the latest month's figures.
b. The monthly production of each fiber may be calculated as total shipments plus a stock increase, or less a stock decrease, over the month.
c. Producers' total domestic shipments plus export shipments.
d. Industrial is defined as 500 denier and coarser with an Instron tenacity of 7 grams or more per denier.
e. Olefin yarn+monofilaments also includes spunbonded polypropylene and film fiber produced for textile end uses.
f. Includes low denier industrial yarn.

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- Industrial Yarn
- Carpet Yarn
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- Flat Yarn
- Feed & Producer Textured Yarn
- Shipments by Denier
- Indirect Exports

Quarterly

- Production
- Domestic Shipments
- Imports
- Exports
- Shipments by Denier
- Inventories
- Primary End Use
- Secondary End Use
- Waste Shipments
- Civil Engineering Fabric Shipments

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Fiber Economics Bureau, Inc.

Formerly Textile Economics Bureau, Inc.

101 Eisenhower Parkway
Roseland, New Jersey 07068
Telephone (201) 228-1107
FAX (201) 228-7598